STIC Search Report
EIC 2100

STIC Database Tracking Number: 110818

TO:	From:
Chongshan Chen **Location: 4B25** **Art Unit : 2172** **Monday, December 29, 2003** **Case Serial Number: 09/647266**	**David Holloway** **Location: EIC 2100** **PK2-4B30** **Phone: 308-7794** **david.holloway@uspto.gov**

Search Notes

Dear Examiner Chen,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.

David

STIC EIC 2100 Search Request Form

110818

92

Today's Date: 12-22-03

What date would you like to use to limit the search?

Priority Date: 2/15/2000 Other:

Name Chongshan Chen

AU 2172 Examiner # 79547

Room # 4B25 Phone 305-8319

Serial # 09/647,266

Format for Search Results (Circle One):

(PAPER) DISK EMAIL

Where have you searched so far?

(USP) DWPI EPO JPO ACM IBM TDB

IEEE INSPEC SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) YES (NO)

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at http://ptoweb/patents/stic/stic-tc2100.htm.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

A method of searching a database to find documents similar to a query document, comprising:

Decomposing the query document into elements of different data types;

Determining a layout element in a layout datatype from the spatial arrangement of the elements in the document; and

For the layout element, conducting a layout similarity search to return match results from the database for the layout element.

12-22-03 A11:54 IN

STIC Searcher David Holloway Phone 308-7794

Date picked up 12-24-03 Date Completed 12-29-03

```
Set     Items   Description
S1         19   AU=(SHARPE, W? OR SHARPE W?)
S2        348   AU=(BURNS R? OR BURNS, R?)
S3          3   S1 AND S2
S4          9   (S1 OR S2) AND IC=(G06F-017/30 OR G06F-007/00)
S5          4   S4 AND (SEARCH? OR QUER? OR MATCH? OR RETRIEV? OR FIND? OR
              LOCAT? OR SEEK?)
S6          9   S3 OR S4
S7          9   IDPAT (sorted in duplicate/non-duplicate order)
S8          7   IDPAT (primary/non-duplicate records only)
File 344:Chinese Patents Abs Aug 1985-2003/Nov
         (c) 2003 European Patent Office
File 347:JAPIO Oct 1976-2003/Aug(Updated 031202)
         (c) 2003 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2003/Dec W02
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20031218,UT=20031211
         (c) 2003 WIPO/Univentio
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200382
         (c) 2003  Thomson Derwent
```

8/5,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015477891 **Image available**
WPI Acc No: 2003-540038/200351
XRPX Acc No: N03-428280
Computer system with asset access management facility, has client computer that selectively relinquishes access lock, based on existence of access conditions for asset, on receiving demand from server
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: **BURNS R C** ; GOEL A; REES R M
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6571276	B1	20030527	US 2000510784	A	20000223	200351	B

Priority Applications (No Type Date): US 2000510784 A 20000223
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6571276	B1		8	G06F-017/30	

Abstract (Basic): US 6571276 B1
NOVELTY - A client computer receives an access lock pertaining to an asset in a distributed storage system, from a server. The client computer selectively relinquishes the access lock, based on existence of access conditions for the asset, on receiving demand from the server.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) computer program device; and
(2) computer-implemented asset access management method.
USE - For managing access to assets in distributed data storage systems such as file systems and databases.
ADVANTAGE - Enables improving the speed, ease and efficiency of the distributed computer system.
DESCRIPTION OF DRAWING(S) - The figure shows a flowchart explaining the method of processing demand from the server by the client computer.

pp; 8 DwgNo 6/6
Title Terms: COMPUTER; SYSTEM; ACCESS; MANAGEMENT; FACILITY; CLIENT; COMPUTER; SELECT; ACCESS; LOCK; BASED; EXIST; ACCESS; CONDITION; RECEIVE; DEMAND; SERVE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
International Patent Class (Additional): G06F-011/30
File Segment: EPI
Inventor: **BURNS R C** ...
International Patent Class (Main): **G06F-017/30**

8/5,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014705644 **Image available**
WPI Acc No: 2002-526348/200256
Related WPI Acc No: 2001-564695
XRPX Acc No: N02-416521
Predetermined constraints imposing method in autonomous vehicle system, involves imposing selected safety measure, when safety envelopes assigned to vehicles traveling along different trajectories, is predicted to overlap
Patent Assignee: MODULAR MINING SYSTEMS INC (MODU-N)
Inventor: **BURNS R L**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week

US 6393362 B1 20020521 US 2000521436 A 20000307 200256 B

Priority Applications (No Type Date): US 2000521436 A 20000307
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
US 6393362 B1 15 G01S-005/00

Abstract (Basic): US 6393362 B1
NOVELTY - The position of the safety envelope is predicted, when the vehicle travels along a trajectory. A selected safety measure is imposed on any of the vehicle, when the envelopes assigned to the vehicles traveling along different trajectories is predicted to overlap with each other.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for traffic control apparatus.
USE - Used in airtraffic, underground mining, digging, shipping, trucking, surface mines, vehicle operations.
ADVANTAGE - Avoids collisions in a simple and efficient manner. Avoids the hazards by all moving vehicles and equipment operating in surface mine.
DESCRIPTION OF DRAWING(S) - The figure shows the flowchart explaining the steps involved in the constraints imposing method.
pp; 15 DwgNo 9/10
Title Terms: PREDETERMINED; CONSTRAIN; IMPOSE; METHOD; AUTONOMOUS; VEHICLE; SYSTEM; IMPOSE; SELECT; SAFETY; MEASURE; SAFETY; ENVELOPE; ASSIGN; VEHICLE; TRAJECTORY; PREDICT; OVERLAP
Derwent Class: T01; T06; T07; W06; X22; X25
International Patent Class (Main): G01S-005/00
International Patent Class (Additional): G01S-013/00; **G06F-007/00** ; G06F-017/00; G06F-019/00
File Segment: EPI

Inventor: **BURNS R L**
...International Patent Class (Additional): **G06F-007/00**

8/5,K/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014358483 **Image available**
WPI Acc No: 2002-179184/200223
XRPX Acc No: N02-136293
Data object version handling method for real-time application, involves producing set which is approximate with set produced by scanning one version to find possible match with string in another version
Patent Assignee: AJTAI M (AJTA-I); BURNS R C (BURN-I); FAGIN R (FAGI-I); STOCKMEYER L J (STOC-I); INT BUSINESS MACHINES CORP (IBMC)
Inventor: AJTAI M; **BURNS R C** ; FAGIN R; STOCKMEYER L J
Number of Countries: 001 Number of Patents: 002
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
US 20020010702 A1 20020124 US 97794134 A 19970203 200223 B
US 6374250 B1 20020416 US 97794134 A 19970203 200232

Priority Applications (No Type Date): US 97794134 A 19970203
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
US 20020010702 A1 29 G06F-007/00
US 6374250 B1 G06F-017/30
Abstract (Basic): US 20020010702 A1
NOVELTY - A consecutive linear pass is performed on two versions for identifying and matching a byte-level string in one version with a string in another version. A set containing identified matching segments and corresponding offsets reflecting the relative positions of the segments within the versions are produced, to approximate with another set produced by scanning one version to find possible match with string in another version.

USE - For handling versions of data objects for storage and transmission for real-time applications.

ADVANTAGE - Accepts arbitrarily large input file without degradation in rate of compression, thereby producing steady output data streams with high reliability in predetermined time.

DESCRIPTION OF DRAWING(S) - The figure is a snapshot representation of data stream showing group of fixed length symbol string used for footprinting.

pp; 29 DwgNo 2/14

Title Terms: DATA; OBJECT; VERSION; HANDLE; METHOD; REAL; TIME; APPLY; PRODUCE; SET; APPROXIMATE; SET; PRODUCE; SCAN; ONE; VERSION; FINDER; POSSIBILITY; MATCH; STRING; VERSION

Derwent Class: T01

International Patent Class (Main): **G06F-007/00 ; G06F-017/30**

File Segment: EPI

...Inventor: **BURNS R C**

International Patent Class (Main): **G06F-007/00** ...

... **G06F-017/30**

8/5,K/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013522323 **Image available**

WPI Acc No: 2001-006529/200101

XRPX Acc No: N01-004680

Query based similar documents searching method for database management, involves conducting similarity search of two data types, to obtain match results from database, based on elements of query document

Patent Assignee: HEWLETT-PACKARD CO (HEWP)

Inventor: **BURNS R J ; SHARPE W**

Number of Countries: 021 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200049526	A1	20000824	WO 2000GB489	A	20000215	200101	B
EP 1072001	A1	20010131	EP 2000903814	A	20000215	200108	
			WO 2000GB489	A	20000215		
JP 2002537604	W	20021105	JP 2000600197	A	20000215	200304	
			WO 2000GB489	A	20000215		

Priority Applications (No Type Date): GB 993451 A 19990216

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200049526	A1	E	20	G06F-017/30	
Designated States (National): JP US					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
EP 1072001	A1	E		G06F-017/30	Based on patent WO 200049526
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
JP 2002537604	W		21	G06F-017/30	Based on patent WO 200049526

Abstract (Basic): WO 200049526 A1

NOVELTY - The query document is divided into element of different data types. Then, similarity search of two data types is done to obtain match results from the database for corresponding elements in data types. The match results are combined, to provide query document match results.

USE - For searching documents similar to query document, in database.

ADVANTAGE - Allows the features of the document to be used appropriately, in a search that is properly representative of the full document.

DESCRIPTION OF DRAWING(S) - The figure shows the flow chart for conducting similarity search.

pp; 20 DwgNo 2/4
Title Terms: QUERY; BASED; SIMILAR; DOCUMENT; SEARCH; METHOD; DATABASE; MANAGEMENT; CONDUCTING; SIMILAR; SEARCH; TWO; DATA; TYPE; OBTAIN; MATCH; RESULT; DATABASE; BASED; ELEMENT; QUERY; DOCUMENT
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
International Patent Class (Additional): G06T-007/00
File Segment: EPI

Inventor: **BURNS R J** ...

... **SHARPE W**
International Patent Class (Main): **G06F-017/30**

8/5,K/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013064746 **Image available**
WPI Acc No: 2000-236618/200020
XRPX Acc No: N00-177380
System for generating, transmitting, replicating, and rebuilding in-place reconstructible software updates to a file from a source computer to a target computer
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: **BURNS R C** ; LONG D D E
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6018747	A	20000125	US 97978550	A	19971126	200020	B

Priority Applications (No Type Date): US 97978550 A 19971126
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6018747	A		13	G06F-017/30	

Abstract (Basic): US 6018747 A
NOVELTY - The system stores the first version of the file and the updates to the first version of the file in the memory of the source computer. The first version is also stored in the memory of the target computer. The updates are then transmitted from the memory of the source computer to the memory of the target computer. The system uses these updates at the target computer to build the second version of the file in-place. The source computer discards the prior version after reconstruction.
USE - The method generates in-place reconstructible delta files on a source computer and reconstitutes them on a target computer or computers.
ADVANTAGE - Reduces the amount of time and network bandwidth required to transmit versions of files to a computer without needing additional memory or disk space on the target computer.
DESCRIPTION OF DRAWING(S) - The figure shows a delta file produced by the above method.
pp; 13 DwgNo 3/6
Title Terms: SYSTEM; GENERATE; TRANSMIT; REPLICA; REBUILD; PLACE; SOFTWARE; UPDATE; FILE; SOURCE; COMPUTER; TARGET; COMPUTER
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

Inventor: **BURNS R C** ...
International Patent Class (Main): **G06F-017/30**

8/5,K/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008291932 **Image available**
WPI Acc No: 1990-178933/199023
Related WPI Acc No: 1991-007384; 1991-058424
XRPX Acc No: N90-139062

Electronic document display with annotation routines and windows - providing annotation of document through electronic stylus and tablet, keyboard and and audio assembly

Patent Assignee: WANG LAB INC (WANG)
Inventor: ABRAMS K H; **BURNS R S** ; COLLEY R E; HARUI A J; LAKNESS D R; LEVINE S R; RUDIS R F; **BURNS R**
Number of Countries: 021 Number of Patents: 010
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9005333	A	19900517				199023	B
CA 2001895	A	19900501				199026	
AU 8946294	A	19900528				199035	
EP 404893	A	19910102	EP 89913139	A	19891026	199102	
JP 3503580	W	19910808				199138	
EP 404893	B1	19950222	EP 89913139	A	19891026	199512	
			WO 89US4790	A	19891026		
DE 68921336	E	19950330	DE 621336	A	19891026	199518	
			EP 89913139	A	19891026		
			WO 89US4790	A	19891026		
EP 404893	A4	19930505	EP 89913139	A	19890000	199526	
CA 2001895	C	19960618	CA 2001895	A	19891031	199636	
JP 2993732	B2	19991227	WO 89US4790	A	19891026	200006	
			JP 90500081	A	19891026		

Priority Applications (No Type Date): US 88265686 A 19881101
Cited Patents: Jnl.Ref; JP 59114631; JP 59125425; JP 60218128; US 4633436
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9005333	A		2		
Designated States (National): AU BR DK FI JP KP KR NO SU					
Designated States (Regional): AT BE CH DE FR GB IT LU NL SE					
JP 2993732	B2		16	G06F-017/30	Previous Publ. patent JP 3503580
					Based on patent WO 9005333
EP 404893	A				
Designated States (Regional): AT BE CH DE FR GB IT LU NL SE					
EP 404893	B1 E		19	G06F-003/14	Based on patent WO 9005333
Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE					
DE 68921336	E			G06F-003/14	Based on patent EP 404893
					Based on patent WO 9005333
CA 2001895	C			G06F-015/00	

Abstract (Basic): WO 9005333 A

The apparatus has a processor for executing programs, and e display views (32) generated during execution of the programs. An annotation input device provides an input to stop performance of a program being currently executed by the processor. In response, the processor saves an image of each window currently being displayed and saves the current state of the program.

A second input annotates a saved window image through the annotation device. In response the processor annotates the saved image and then resumes execution of the program. The device may employ an electronic stylus and an electronic tablet which emulate a pencil and pad.

ADVANTAGE - Enables document to be chosen from program which supports running of multiple windows.

Dwg.2/5

Title Terms: ELECTRONIC; DOCUMENT; DISPLAY; ROUTINE; WINDOW; DOCUMENT; THROUGH; ELECTRONIC; STYLUS; TABLET; KEYBOARD; AUDIO; ASSEMBLE
Derwent Class: T01
International Patent Class (Main): G06F-003/14; G06F-015/00; **G06F-017/30**
International Patent Class (Additional): G06F-003/00; G06F-003/033; G06F-012/00
File Segment: EPI

...Inventor: **BURNS R S** ...

... **BURNS R**
...International Patent Class (Main): **G06F-017/30**

8/5,K/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004013200
WPI Acc No: 1984-158742/198425
XRPX Acc No: N84-117993
Cheque terminal verifying and printing method - transmitting account number and money sum to extrinsic banking facility and receiving acceptance acknowledgement from it
Patent Assignee: SILER M D (SILE-I)
Inventor: **BURNS R D** ; ELAM L P
Number of Countries: 007 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 8402212	A	19840607	WO 83US1852	A	19831122	198425	B
AU 8423342	A	19840618				198439	
CA 1230423	A	19871215				198802	

Priority Applications (No Type Date): US 83477237 A 19830321; US 82443203 A 19821122
Cited Patents: US 3818187; US 4053735; US 4109238; US 4321672; US 4385285
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 8402212	A	E	35		

Designated States (National): AU CH DE GB JP SE

Abstract (Basic): WO 8402212 A

The method comprises the steps of reading a cheque account number of a purchaser by passing a cheque bearing account number information by a character reader and entering the read account number into a data memory. A personal identification number of the purchaser is entered into memory in association with the account number. The translation is verified by communicating to a verification facility the read account number and the entered personal identification number and receiving verification from it.

A money cost sum is entered into memory associated with the cost of the merchandise or services. The read account number and entered money sum is then communicated to a banking facility and upon receipt of an acknowledgement from the facility the money sum is printed on the cheque by passing the cheque by a character printer.

4/11

Title Terms: CHEQUE; TERMINAL; VERIFICATION; PRINT; METHOD; TRANSMIT; ACCOUNT; NUMBER; MONEY; SUM; EXTRINSIC; BANK; FACILITY; RECEIVE; ACCEPT; ACKNOWLEDGE
Derwent Class: T01; T04; T05
International Patent Class (Additional): **G06F-007/00** ; G06F-015/21; G06K-009/00
File Segment: EPI

Inventor: **BURNS R D** ...
International Patent Class (Additional): **G06F-007/00** ...

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Set     Items   Description
S1        360   AU=(SHARPE, W? OR SHARPE W?)
S2       1686   AU=(BURNS R? OR BURNS, R?)
S3          0   S1 AND S2
S4        104   (S1 OR S2) AND (SEARCH? OR QUER? OR MATCH? OR RETRIEV? OR -
                 FIND? OR LOCAT? OR SEEK?)
S5       2414   COMPOUND()DOCUMENT? OR (DIFFER? OR MULTIPL? OR MIXED OR HE-
                 TEROGEN? OR VARIOUS? OR VARIET? OR PLURAL?)(N)(DATATYPE? OR D-
                 ATA()TYPE? ?)
S6          0   S4 AND S5
S7         15   S4 AND (LAYOUT? ? OR LAY()OUT? ? OR DESIGN?)
S8         13   RD (unique items)
File   2:INSPEC 1969-2003/Dec W1
         (c) 2003 Institution of Electrical Engineers
File   8:Ei Compendex(R) 1970-2003/Dec W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2003/Nov
         (c) 2003 ProQuest Info&Learning
File  65:Inside Conferences 1993-2003/Dec W3
         (c) 2003 BLDSC all rts. reserv.
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File 647:CMP  Computer Fulltext 1988-2003/Dec W3
         (c) 2003 CMP Media, LLC
File 674:Computer News Fulltext 1989-2003/Dec W1
         (c) 2003 IDG Communications
File 202:Info. Sci. & Tech. Abs. 1966-2003/Nov 17
         (c) 2003 EBSCO Publishing
File 369:New Scientist 1994-2003/Dec W2
         (c) 2003 Reed Business Information Ltd.
File 636:Gale Group Newsletter DB(TM) 1987-2003/Dec 24
         (c) 2003 The Gale Group
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8/5/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

7104621 INSPEC Abstract Number: A2002-01-0650-001, B2002-01-7210G-002
Title: Sensor bandwidth reduction for data capture
Author(s): Knight, M.J.; Sutton, R.; **Burns, R.S.** ; Jenkins, D.F.L.
Author Affiliation: Dept. of Mech. & Marine Eng., Plymouth Univ., UK
Journal: Measurement Science & Technology vol.12, no.10 p.N35-8
Publisher: IOP Publishing,
Publication Date: Oct. 2001 Country of Publication: UK
CODEN: MSTCEP ISSN: 0957-0233
SICI: 0957-0233(200110)12:10L.n35:SBRD;1-E
Material Identity Number: N647-2001-010
U.S. Copyright Clearance Center Code: 0957-0233/2001/100035+04$30.00
Document Number: S0957-0233(01)24684-0
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: High precision positioning mechanisms with accurate displacement resolutions **find** employment in many industrial applications. In devices such as incremental encoders, the high resolution comes at the expense of increased sensor bandwidth. This **design** note describes a low-cost method for implementing effective bandwidth reduction, without reducing the achievable displacement resolution. (2 Refs)
Subfile: A B
Descriptors: angular measurement; data acquisition; electric sensing devices; encoding; feedback; position control; position measurement
Identifiers: sensor bandwidth reduction; data capture; high precision positioning mechanisms; accurate displacement resolutions; incremental encoders; high resolution; low-cost method; effective bandwidth reduction; displacement resolution
Class Codes: A0650D (Data gathering, processing, and recording, data displays including digital techniques); A0630C (Spatial variables measurement); A0670D (Sensing and detecting devices); B7210G (Data acquisition systems); B7320C (Spatial variables measurement); B7230 (Sensing devices and transducers)

8/5/2 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

6805554 INSPEC Abstract Number: B2001-02-7610-013
Title: TechSat 21: formation design **, control, and simulation**
Author(s): **Burns, R.** ; McLaughlin, C.A.; Leitner, J.; Martin, M.
Author Affiliation: Res. Lab., Kirtland Air Force Base, NM, USA
Conference Title: 2000 IEEE Aerospace Conference. Proceedings (Cat. No.00TH8484) Part vol.7 p.19-25 vol.7
Publisher: IEEE, Piscataway, NJ, USA
Publication Date: 2000 Country of Publication: USA 7 vol.(xxviii+566+524+512+566+554+586+686) pp.
ISBN: 0 7803 5846 5 Material Identity Number: XX-2000-02333
U.S. Copyright Clearance Center Code: 0 7803 5846 5/2000/$10.00
Conference Title: 2000 IEEE Aerospace Conference Proceedings
Conference Sponsor: IEEE Aerosp. & Electron. Syst. Soc
Conference Date: 18-25 March 2000 Conference Location: Big Sky, MT, USA
Language: English Document Type: Conference Paper (PA)
Treatment: General, Review (G)
Abstract: The satellite cluster approach to space missions requires science and technology advances in several key areas. Among these challenges is understanding the dynamics of satellites in close proximity to each other so that a formation can be intelligently **designed** , controlled, and simulated. An overview of on-going research in this area under the TechSat 21 program along with preliminary **findings** is provided. Included in this overview is the recent progress made in the **design** of formations including **designs** for circular formations, projected circular

formations, and J/sub 2/ invariant formations. Strategies for formation control are presented as well as the baseline **design** for the TechSat 21 propulsion system. Fuel expenditure is estimated for various formations using different control strategies. The TechSat 21 mission requires relative position knowledge between satellites to the millimeter level while the radar is transmitting and receiving; concepts for meeting this requirement are also presented. In order to facilitate mission planning and gain confidence in mission success, the Air Force Research Laboratory (AFRL) is building an end to end simulation testbed for the TechSat 21 mission. An overview of the testbed **design** and functionality is provided. Focus is centered on the dynamics and control module of the testbed. The dynamics and control module utilizes high fidelity orbit propagation as the basis of the simulation of the formation dynamics. Through this simulation control algorithms, relative navigation techniques, and the effects of errors in initial conditions and control forces are investigated. (33 Refs)

Subfile: B

Descriptors: aerospace simulation; artificial satellites; military systems

Identifiers: simulation; satellite cluster; space missions; on-going research; circular formations; projected circular formations; J/sub 2/ invariant formations; formation control; baseline **design** ; TechSat 21 propulsion; fuel expenditure; mission planning; Air Force Research Laboratory; simulation testbed; orbit propagation; simulation control algorithms; relative navigation; aerospace simulation

Class Codes: B7610 (General aspects of aircraft, space vehicles and satellites); B7620 (Aerospace test facilities and simulation); B7990 (Other military topics)

8/5/3 (Item 3 from file: 2)

4890121 INSPEC Abstract Number: A9506-6220F-006

Title: ASME 1993 Nadai Lecture-elastoplastic stress and strain concentrations

Author(s): **Sharpe, W.N., Jr.**

Author Affiliation: Dept. of Mech. Eng., Johns Hopkins Univ., Baltimore, MD, USA

Journal: Transactions of the ASME. Journal of Engineering Materials and Technology vol.117, no.1 p.1-7

Publication Date: Jan. 1995 Country of Publication: USA

CODEN: JEMTA8 ISSN: 0094-4289

U.S. Copyright Clearance Center Code: 0094-4289/95/$3.00

Language: English Document Type: Journal Paper (JP)

Treatment: General, Review (G)

Abstract: Elastic stress concentration factors are familiar and easily incorporated into the **design** of components or structures through charts or finite element analysis. However when the material at the most concentrated **location** no longer behaves elastically, computation of the focal stresses and strains is not so easy. Local elastoplastic behavior is an especially important consideration when the loading is cyclic. This paper summarizes the predictive capability of the Neuber and the Glinka models that relate gross loading to the local stresses and strains. The author and his students have used a unique laser-based technique capable of measuring biaxial strains over very short gage lengths to evaluate the two models. Their results, as well as those from earlier studies by other researchers using foil gages, lead to the general conclusion that the Neuber model works best when the local region is in a state of plane stress and the Glinka model is best for plane strain. There are intermediate levels of constraint that are neither plane stress nor plane strain. This paper presents a recommended practice for predicting the local elastoplastic stresses and strains for any constraint. First, one computes or estimates the initial elastic strains. Then, based on the amount of elastic constraint one selects the appropriate model to compute the local elastoplastic stresses and strains. (35 Refs)

Subfile: A
Descriptors: elastoplasticity; finite element analysis; reviews; stress-strain relations
Identifiers: ASME 1993 Nadai Lecture; elastoplastic stress concentration; elastoplastic strain concentrations; focal stresses; unique laser-based technique
Class Codes: A6220F (Deformation and plasticity); A0260 (Numerical approximation and analysis); A0130R (Reviews and tutorial papers; resource letters)

8/5/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC

4733237 INSPEC Abstract Number: B9409-8310E-046, C9409-1230D-217
Title: A methodology using fuzzy logic to optimize feedforward artificial neural network configurations
Author(s): **Sharpe, W.N.** ; Mo-Yuen Chow; Briggs, S.; Windingland, L.
Author Affiliation: Dept. of Electr. Eng., North Carolina State Univ., Raleigh, NC, USA
Journal: IEEE Transactions on Systems, Man and Cybernetics vol.24, no.5 p.760-8
Publication Date: May 1994 Country of Publication: USA
CODEN: ISYMAW ISSN: 0018-9472
U.S. Copyright Clearance Center Code: 0018-9472/94/$04.00
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P); Theoretical (T)
Abstract: After a problem has been formulated for solution by using artificial neural network technology, the next step is to determine the appropriate network configuration to be used in achieving a desired level of performance. Due to the real world environment and implementation constraints, different problems require different evaluation criteria such as: accuracy, training time, sensitivity, and the number of neurons used. Tradeoffs exist between these measures, and compromises are needed in order to achieve an acceptable network **design** . This paper presents a method using fuzzy logic techniques to adapt the current network configuration to one which is close to (if not at) the optimal configuration. The fuzzy logic provides a method of systematically changing the network configuration while simultaneously considering all of the evaluation criteria. The optimal configuration is determined by a cost function based on the evaluation criteria. The proposed methodology is applied to an elementary classifier network as an illustration. The procedure is then used to automatically configure a network used to detect incipient faults in an induction motor as a real world application. (33 Refs)
Subfile: B C
Descriptors: fault **location** ; feedforward neural nets; fuzzy logic; induction motors; learning (artificial intelligence); sensitivity
Identifiers: fuzzy logic; feedforward artificial neural network configurations; evaluation criteria; accuracy; training time; sensitivity; optimal configuration; elementary classifier network; induction motor; fault detection
Class Codes: B8310E (Asynchronous machines); C1230D (Neural nets); C5290 (Neural computing techniques); C7410B (Power engineering)

8/5/5 (Item 5 from file: 2)
DIALOG(R)File 2:INSPEC

02731470 INSPEC Abstract Number: C86049715
Title: Teaching basic skills through microcomputer assisted instruction
Author(s): Bass, G.; Ries, R.; **Sharpe, W.**
Author Affiliation: Coll. of William & Mary, Williamsburgh, VA, USA
Journal: Journal of Educational Computing Research vol.2, no.2 p. 207-19
Publication Date: 1986 Country of Publication: USA

CODEN: JERSEY ISSN: 0735-6331
Language: English Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: Low achieving students in grades 4-6 were given supplementary microcomputer assisted instruction in reading and mathematics. Students' performance was assessed with a pretest/posttest nonequivalent control group **design** using standardized achievement and affective tests. Although all microcomputer experimental groups showed statistically significant pretest/posttest gains in reading and mathematics, the control groups using conventional instructional methods also showed similar gains. Analysis of covariance of achievement gains revealed only one experimental group, sixth grade reading, to be statistically superior to the control groups' performance. No significant changes in students' attitudes toward schooling or sense of control over their own performance were detected. Implications of this study's **design** and **findings** are discussed with respect to past CAI research and present CAI school practices. (18 Refs)
Subfile: C
Descriptors: computer aided instruction; microcomputer applications
Identifiers: microcomputer assisted instruction; reading; mathematics; CAI research
Class Codes: C7810C (Computer-aided instruction)

8/5/6 (Item 6 from file: 2)
DIALOG(R)File 2:INSPEC

01259916 INSPEC Abstract Number: B78047848, C78027453
Title: Multi-function inertial reference assembly (MIRA) update
Author(s): **Burns, R.C.** ; Perdzock, J.M.
Author Affiliation: McDonnell Douglas Corp., St. Louis, MO, USA
Conference Title: Proceedings of the IEEE 1978 National Aerospace and Electronics Conference NAECON 78 Part II p.798-807
Publisher: IEEE, New York, NY, USA
Publication Date: 1978 Country of Publication: USA xliv+510 pp.
Conference Sponsor: IEEE; American Inst. Aeronautics and Astronautics
Conference Date: 16-18 May 1978 Conference Location: Dayton, OH, USA
Language: English Document Type: Conference Paper (PA)
Treatment: General, Review (G)
Abstract: Presents a summary of the preliminary assessment task studies that showed significant cost savings were potentially possible based upon projected improvements in strapped down technology. Describes the three candidate MIRA configurations chosen for further analysis leading to the selection of a single MIRA **design** . **Design** criteria for candidate evaluation are described in relation to key study **findings** in the area of performance, survivability, reliability and installation. The three candidate MIRA systems are then discussed in terms of risk estimation versus potential life cycle cost savings. (2 Refs)
Subfile: B C
Descriptors: aerospace control; aircraft instrumentation; military systems
Identifiers: MIRA; performance; survivability; reliability; installation; life cycle cost; multi function inertial reference assembly; **design** criteria
Class Codes: B7630 (Avionic systems and instrumentation); B7910 (Military circuits, components, and equipment); C3360L (Aerospace systems)

8/5/7 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

06309314 E.I. No: EIP03097376729
Title: Sea SLICE demonstrates multi-mission flexibility
Author: **Burns, Richard F.**
Source: Sea Technology v 43 n 11 November 2002. p 19-22
Publication Year: 2002
ISSN: 0093-3651

Language: English
Document Type: JA; (Journal Article) Treatment: T; (Theoretical)
Journal Announcement: 0303W2
Abstract: Sea SLICE technology is a patented ship **design** that enables small waterplane area twin-hull (SWATH) ships to operate at higher speeds without sacrificing efficiency by attaining low motion in a seaway. The key to this innovation is the reduction of wake-making drag, which is accomplished by the introduction of four submerged teardrop-shaped pods attached to the hull by short struts-the forward two pods house diesel engines which power the ship to 30 knots. This configuration enables the attainment of speeds well beyond the hump on the Froude wave resistance curve-a limiting factor in traditional surface-ship hull/propulsion **design** . Compact in size, high speed, superior seakeeping ability, low wake wash and modular **design** make Lockheed Martin's ship system the ideal candidate for many military and commercial markets. Sea SLICE's unobstructed stern, large exposed deck spaces and modular payload capability simplify payload balancing. The Sea SLICE HSV has a scalable architecture, which can reach 45 knots top speed while traveling in rough water up to sea state six. Combining a high-speed capability in high seas, Sea SLICE technology opens up a new set of options to commercial and military customers. Government applications include patrol/interdiction, **search** and rescue, bouy tending, oceanographic and hydrographic survey or missile satellite tracking. These types of missions need greater stability to carry out primary mission objectives, but also benefit from increased speed in reaching their destinations. Military coastal applications for Sea SLICE include command, communications and control, surveilliance and reconaissiance, missile launching, mine warfare, littoral ASW, defense against small boats, helicopter support, special operations warfare, AUV/UUV support and test range support. Ship operators want small affordable ships that perform at high speed in high seas. This technology fulfills both of these requirements and is ideal for many commercial applications. Commercial uses that require stability for both operation and passenger/crew comfort and that would benefit from getting passengers/technical specialists to their destinations quickly are potential applications. Applications include offshore support, oil spill response, excursion and recreation vessel and craft. The experimental joint high-speed vessel Joint Venture (HSV-XI) has been evaluating the potential of fast, shallow draft, open architecture, multi-mission vessels with large payload fractions in the areas of mine warfare, special operations, ship-to-objective maneuver, and medical and non-combatant support operations.
Descriptors: *Ship models; Hulls (ship); Drag; Military satellites; Tracking (position); Military operations
Identifiers: Small waterplane area twin-hull (SWATH) ships
Classification Codes:
671.3 (Ship Models); 671.1 (Ship Design); 631.1 (Fluid Flow, General); 404.1 (Military Engineering); 655.2 (Satellites); 654.1 (Rockets & Missiles)
671 (Naval Architecture); 631 (Fluid Flow); 404 (Civil Defense & Military Engineering); 655 (Spacecraft); 654 (Rockets & Rocket Propulsion)
67 (NAVAL ARCHITECTURE & MARINE ENGINEERING); 63 (FLUID FLOW; HYDRAULICS, PNEUMATICS & VACUUM); 40 (CIVIL ENGINEERING, GENERAL); 65 (AEROSPACE ENGINEERING)

8/5/8 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04604723 E.I. No: EIP97013507930
Title: Submersibles, marine technologies
Author: **Burns, Richard F.**
Source: Sea Technology v 37 n 12 Dec 1996. 8p
Publication Year: 1996
CODEN: SEATAD ISSN: 0093-3651
Language: English
Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9703W3
Abstract: An assessment of submersible and other marine vehicle technologies in Siberia and Russian Far East identified two institutions in Vladivostok which proved to have extensive developments. The Far Eastern State Technical University (FESTU), whose ROV technologies were mainly for hydroacoustical, magnetic and photographic work, is currently engaged in fiber optic sensors technology for ocean tomography and artificial neural networks for sensor data interpretations; while the Institute for Marine Technology Problems (IMTP) has demonstrated an AUV program that is surprisingly extensive in **design** capability, vision for future **designs** , and operational experiences. Various aspects of the technologies were evaluated including control, navigation and sensors.
Descriptors: Submersibles; Societies and institutions; Oceanography; Sonar; Fiber optic sensors; Neural networks; Inertial navigation systems; Adaptive control systems; Radio direction **finding** systems; Computer aided **design**
Identifiers: Remotely operated vehicles (ROV); Autonomous underwater vehicles (AUV); Long baseline bottom transponder positioning systems
Classification Codes:
901.1.1 (Societies & Institutions); 741.1.2 (Fiber Optics)
674.1 (Small Marine Craft); 901.1 (Engineering Professional Aspects); 471.1 (Oceanography, General); 752.1 (Acoustic Devices); 741.1 (Light/Optics); 732.2 (Control Instrumentation)
674 (Other Marine Craft); 901 (Engineering Profession); 471 (Marine Science & Oceanography); 752 (Sound Equipment & Systems); 741 (Optics & Optical Devices); 732 (Control Devices)
67 (MARINE ENGINEERING); 90 (GENERAL ENGINEERING); 47 (OCEAN TECHNOLOGY); 75 (ACOUSTICAL TECHNOLOGY); 74 (OPTICAL TECHNOLOGY); 73 (CONTROL ENGINEERING)

8/5/9 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04572390 E.I. No: EIP96123450370
Title: Modular engine room design **and construction for the strategic sealift ships**
Author: Jaquith, Peter E.; **Burns, Richard M.** ; Dunbarr, Steve E.; Fontaine, B.J.; Nelson, Harry A.; Silveira, John L.; Thompson, Tom D.
Corporate Source: Natl Steel and Shipbuilding Co (NASSCO), San Diego, CA, USA
Source: Journal of Ship Production v 12 n 4 Nov 1996. p 230-243
Publication Year: 1996
CODEN: JSPREH ISSN: 8756-1417
Language: English
Document Type: JA; (Journal Article) Treatment: G; (General Review)
Journal Announcement: 9701W5
Abstract: During the contract **design** phase of the Strategic Sealift New Construction Program at National Steel and Shipbuilding Company (NASSCO), an innovative **Design** and Build Strategy was developed to reduce the construction time and cost associated with complex engine rooms. A Concurrent Engineering team was assembled to develop the strategy, and to focus **design** , planning, material, and production efforts to achieve a highly modular **design** which allows the installation of the majority of outfit systems and equipment at the more effective Ground Outfit versus Onboard Stage. Due to facility and crane lifting constraints, a modular approach was taken in lieu of the conventional Block Outfit approach. The **Design** and Build Strategy resulted in rationalized system **locations** allowing reduced piping, electrical, and ventilation linear footage while supporting a high level of system completion at the module stage. To implement the **Design** and Build Strategy, a series of cross-functional teams was created to manage the project from contract **design** through production implementation. This paper describes the process and methods used by NASSCO to **design** , plan, and construct this modular Engine Room. (Author abstract) 6 Refs.
Descriptors: *Shipbuilding; Ships; Modular construction; Concurrent engineering; Strategic planning

Identifiers: Modular engine room **design** ; Strategic sealift ships
Classification Codes:
673.1 (Shipbuilding); 405.2 (Construction Methods); 723.5 (Computer Applications); 913.6 (Concurrent Engineering); 912.2 (Management)
673 (Shipbuilding & Shipyards); 674 (Other Marine Craft); 405 (Construction Equipment & Methods); 723 (Computer Software); 913 (Production Planning & Control); 912 (Industrial Engineering & Management)
67 (MARINE ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT)

8/5/10 (Item 4 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03758597 E.I. No: EIP93121144195
Title: Interactive media for communication/advertising - a feasibility study and first trial
Author: **Burns, Rae** ; Deffner, Gerhard
Conference Title: Proceedings of the 37th Annual Meeting the Human Factors and Ergonomics Society
Conference Location: Seattle, WA, USA Conference Date: 19931011-19931015
E.I. Conference No.: 19548
Source: Designing for Diversity Proceedings of the Human Factors and Ergonomics Society v 1 1993. Publ by Human Factors and Ergonomics Society, Inc., Santa Monica, CA, USA. p 635-639
Publication Year: 1993
CODEN: PHFSDQ ISSN: 0163-5182
Language: English
Document Type: CA; (Conference Article) Treatment: A; (Applications); G ; (General Review)
Journal Announcement: 9401W4
Abstract: This paper describes the development and refinement of the ?Interactive Guide**T**M', a multimedia application **designed** to explore the potential use of interactive media for communication/advertising. The domain selected for this empirical evaluation was radial keratotomy, a surgical procedure to correct nearsightedness. Starting from an analysis of patient information needs, we conducted iterative cycles of **design** , review, and testing which focused on topic selection, presentation styles and usability. Usage data and feedback from subjects have been very encouraging, pointing to the potential of this approach to establish a new style of information delivery. (Author abstract) Refs.
Descriptors: Interactive devices; Marketing; Consumer products; Information dissemination; Information **retrieval** systems; Man machine systems; User interfaces
Identifiers: Interactive media; Keratotomy
Classification Codes:
722.2 (Computer Peripheral Equipment); 911.4 (Marketing); 903.2 (Information Dissemination); 903.3 (Information Retrieval & Use); 461.4 (Human Engineering)
722 (Computer Hardware); 911 (Industrial Economics); 913 (Production Planning & Control); 903 (Information Science); 461 (Biotechnology)
72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT); 90 (GENERAL ENGINEERING); 46 (BIOENGINEERING)

8/5/11 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01849186 ORDER NO: AADAA-I3025259
Learning the politics of ministry practice
Author: **Burns, Robert Wallace**
Degree: Ph.D.
Year: 2001
Corporate Source/Institution: University of Georgia (0077)
Director: Ronald M. Cervero

Source: VOLUME 62/09-A OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 2949. 269 PAGES
Descriptors: EDUCATION, ADULT AND CONTINUING ; RELIGION, CLERGY
Descriptor Codes: 0516; 0319
ISBN: 0-493-37022-6

Politics are a daily reality in the ministry. Pastors do not learn the politics of practice through the traditional methods of theological and continuing pastoral education. Adult education literature suggests that this learning takes place in the context of professional practice. In order to achieve informed practice in ministry, it is important to identify pastor's political knowledge and how they have developed this knowledge. Therefore, the purpose of this study was to understand how pastors have learned the politics of ministry practice.

Three research questions guided this study: (1) What issues frame the politics of practice in the ministry? (2) How do pastors negotiate these issues in their practice? And, (3) How have pastors learned to negotiate in their practice? The study utilized a qualitative **design** using semi-structured interviews with eleven demographically diverse pastors from seven states spanning the continental United States. The unit of analysis was the critical incidents they recounted from practice situations and the data was analyzed using the constant comparative method.

The **findings** of the study were that pastors in all types of ministry roles continually negotiate ministry issues within power relations and contextual frame factors. These negotiations, in turn, impact both substantive programs and the deeper metaculture of the church. Further, pastors learn negotiation in practice through reflection-in-action, reflection-on-action, mentors and models, and negative experiences.

The study provided three primary conclusions centered on the themes of the politics of practice, ministry skills, and professional learning. The first conclusion regarding the politics of practice was that negotiation is the central political action of pastors and is the ongoing, daily experience of ministry life. The second conclusion regarding ministry skills was that negotiation is a vital skill for ministry practice. The third conclusion regarding professional learning was that while it is necessary for pastors to learn the political skills of negotiation, they do not learn them until they get into practice.

8/5/12 (Item 1 from file: 202)

1103915

A survey of user attitudes toward selected services offered by the colorado state university libraries.

Book Title: University Of Illinois Graduate School Of Library Science Occasional Papers. No. 121. 1975 November. Occasional Papers, Publications Office, 249 Armory Building, University Of Illinois Graduate School Of Library Science, Champaign 61820. 51 P. 14 Tab. 86

Author(s): **Burns, Robert W, Jr**
Corporate Source: Colorado State University Libraries, Fort Collins;
Hasty, Ronald W.

Publication Date: 1975
Language: English
Document Type: Book Chapter
Record Type: Abstract
Journal Announcement: 1100

This substantial publication grew out of the desire to learn of the necessity of continuing to keep statistics at a science reference desk. In the process, a well- **designed** questionnaire, distributed to science students and teachers at csu, shed light on library users' characteristics, habits, and services needed. The large volume of data (1955 responses, 33% return) can be studied and used in other large university libraries for opening hours policy and staffing. The serials book catalog was found to have heavy use by one-fourth of the clientele, mostly at the reference desk. Bindery policies should be re-examined due to the high fraction

(faculty 72%, students 55%) of dissatisfied patrons who fail to **find** needed volumes because they are in the bindery. An extensive literature review ends by challenging taube's views on the uselessness of library use studies. Appendices.

Classification Codes and Description: 2.04 (User and Usage Studies)
Main Heading: Research Methods

8/5/13 (Item 2 from file: 202)

0700511
The design **and testing of a computerized method of handling library periodicals (title iii).**
Book Title: Grant Oeg-8-9-150022-2022 (095) Mod. Bureau Br-9-h-022. 1970 December. Colorado State University, Fort Collins. 64 P. 38 Ref. Edrs: Ed-050 753; Hc $3.29, Mf $0.65.
Author(s): **Burns, Robert W, Jr**
Publication Date: 1970
Language: English
Document Type: Book Chapter
Record Type: Abstract
Journal Announcement: 0700

This research has developed a homeostatic arrival algorithm which will enable the user to anticipate the arrival of those periodicals having similar and pre-defined intervals between issue arrivals. The algorithm is based upon a data-smoothing technique which utilizes the arithmetic mean and the standard deviation coupled with the construction of a confidence interval (expectancy band) around the sample mean. Arrival time then becomes the boundary of the confidence interval. The algorithm is felt to be capable of generalization to all types of libraries and to operate independently of the geographical **location** of the library.

Classification Codes and Description: 7.01 (Planning, Administration)
Main Heading: Libraries and Information Services

```
Set     Items   Description
S1     424198   SEARCH? OR SEEK? OR QUER? OR FIND? OR MATCH?
S2       4638   (DATA()ELEMENT? OR PAGE? OR DOCUMENT?)(2N)(LAYOUT? ? OR LA-
             Y()OUT? OR DESIGN? OR ARRANGEMENT?)
S3         63   (ARRANG? OR LAYOUT? OR LAY()OUT? OR DESIGN?)(2N)(TEXT(2N)(-
               IMAGE? OR PICTURE?))
S4        114   S1(5N)(S2 OR S3)
S5         77   S4 AND IC=G06F-017?
S6         59   S5 AND MC=T01-J05B?
S7          8   S6 AND (LAYOUT? OR LAY()OUT?)
File 347:JAPIO Oct 1976-2003/Aug(Updated 031202)
         (c) 2003 JPO & JAPIO
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200382
         (c) 2003  Thomson Derwent
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7/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015324282 **Image available**
WPI Acc No: 2003-385217/200337
XRPX Acc No: N03-307673
Document layout **apparatus** searches **pause of character string in text file and sets character strings before and after the pause as string blocks, that are assigned to preset allocation frames**
Patent Assignee: SEIKO EPSON CORP (SHIH)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2003044464	A	20030214	JP 2001231934	A	20010731	200337	B

Priority Applications (No Type Date): JP 2001231934 A 20010731
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2003044464	A		11	G06F-017/21	

Abstract (Basic): JP 2003044464 A
NOVELTY - The pause of a character string in a text file is searched and the character strings before and after the pause is setup as two character string blocks with mutually different references. The character string blocks are matched and allocated to preset allocation frames.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for document **layout** program.
USE - For editing **layout** of document.
ADVANTAGE - Simplifies the document **layout** operation by assigning the character string blocks to preset allocation frames.
DESCRIPTION OF DRAWING(S) - The figure shows a flowchart explaining the document **layout** process. (Drawing includes non-English language text).
pp; 11 DwgNo 1/10
Title Terms: DOCUMENT; **LAYOUT** ; APPARATUS; SEARCH; PAUSE; CHARACTER; STRING; TEXT; FILE; SET; CHARACTER; STRING; AFTER; PAUSE; STRING; BLOCK; ASSIGN; PRESET; ALLOCATE; FRAME
Derwent Class: P75; T01
International Patent Class (Main): **G06F-017/21**
International Patent Class (Additional): B41J-005/30
File Segment: EPI; EngPI

7/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014796679 **Image available**
WPI Acc No: 2002-617385/200266
XRPX Acc No: N02-488584
Document searching system searches document page based on rectangle in graphic pattern representing page
Patent Assignee: NEC CORP (NIDE)
Inventor: SHIRAI A
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020078098	A1	20020620	US 200120415	A	20011218	200266	B
JP 2002183166	A	20020628	JP 2000385461	A	20001219	200266	

Priority Applications (No Type Date): JP 2000385461 A 20001219
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020078098	A1		23	G06F-015/00	
JP 2002183166	A		13	G06F-017/30	

Abstract (Basic): US 20020078098 A1

NOVELTY - A command input unit (104) gives a command to **search** a document **page** which is **designated** as a graphic pattern based on rectangle in a frame in the graphic pattern. A CPU (107) classifies the rectangle based on the **layout** classification criteria. An image display unit (102) displays the page which is searched based on the rectangle classified by the CPU.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) Document filing method; and

(2) Recording medium storing document searching program.

USE - Document searching system.

ADVANTAGE - Automatically provides **layout** of the document and colors of rectangles in graphical **layout** as search conditions, hence users are relieved of the process of inputting keywords as searching conditions.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the **arrangement** of **document searching** system.

Image display unit (102)

Command input unit (104)

CPU (107)

pp; 23 DwgNo 1/14

Title Terms: DOCUMENT; SEARCH; SYSTEM; SEARCH; DOCUMENT; PAGE; BASED; RECTANGLE; GRAPHIC; PATTERN; REPRESENT; PAGE

Derwent Class: T01

International Patent Class (Main): G06F-015/00; **G06F-017/30**

International Patent Class (Additional): G06F-003/14; G06T-001/00; G06T-007/00; G06T-007/40

File Segment: EPI

7/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

014081654 **Image available**

WPI Acc No: 2001-565868/200163

XRPX Acc No: N01-421339

Article ordering and dispatching method for online mail order - by transmitting order to manufacture or supplier and printing documents **in** layout **of seller for** matching **at manufacturer or supplier with finished articles**

Patent Assignee: SIEMENS PRODN & LOGISTICS SYSTEMS AG (SIEI)

Inventor: REICH K; ROSENBAUM W

Number of Countries: 023 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200171576	A2	20010927	WO 2001DE1035	A	20010316	200163	B
AU 200146382	A	20011003	AU 200146382	A	20010316	200210	
EP 1266329	A2	20021218	EP 2001919211	A	20010316	200301	
			WO 2001DE1035	A	20010316		

Priority Applications (No Type Date): DE 1013497 A 20000320

Cited Patents: No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200171576	A2	G	9	G06F-017/60	
Designated States (National): AU CA US					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
AU 200146382	A			G06F-017/60	Based on patent WO 200171576
EP 1266329	A2	G		G06F-017/60	Based on patent WO 200171576
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					

Abstract (Basic): WO 200171576 A

A buyer (1) transmits a purchase order via an electronic network to an online seller (2), who registers and stores the order. An order is

transmitted by the online seller via an electronic network to one or more manufactures or suppliers (3), with data for identifying the purchase order. A request to print labels and billing documents of the online seller is transmitted to a print centre (4).

The printed documents are sent in covers having the appropriate identification marks to the suppliers or manufacturers (3). The ordered articles are produced and combined with the printed documents at the manufacturer or supplier, and a parcel is made up in the **layout** of the online seller for sending to the buyer.

USE - E-commerce.

ADVANTAGE - Allows online retailer to deliver article to customer, with packaging, billing, addressing and information provided in retailer's **layout** , even if article is not in retailer's own stock.

Dwg.1/1

Title Terms: ARTICLE; ORDER; DISPATCH; METHOD; MAIL; ORDER; TRANSMIT; ORDER ; MANUFACTURE; SUPPLY; PRINT; DOCUMENT; **LAYOUT** ; MATCH; MANUFACTURE; SUPPLY; FINISH; ARTICLE

Derwent Class: T01; T04; T05

International Patent Class (Main): **G06F-017/60**

File Segment: EPI

7/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013009108 **Image available**

WPI Acc No: 2000-180960/200016

XRPX Acc No: N00-133469

Document image database search method for managing and searching **large** document **databases, uses** layout **attributes generated from the pages of the document to provide a search criteria**

Patent Assignee: XEROX CORP (XERO)

Inventor: BLOMBERG J L; MAHONEY J V; SHIN C K; TRIGG R H

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5999664	A	19991207	US 97971022	A	19971114	200016	B
JP 11224345	A	19990817	JP 98322580	A	19981112	200054	

Priority Applications (No Type Date): US 97971022 A 19971114

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5999664	A		42	G06K-009/54	
JP 11224345	A		38	G06T-011/60	

Abstract (Basic): US 5999664 A

NOVELTY - Each page image (226) of a document, is segmented into one or more **layout** objects (238), e.g. text blocks, graphics, and image attributes (240) are computed for each object. Attributes (240) are used to describe the **layout** structure of a document page (226) and can be used to search the database for particular document types.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) a machine readable program storage device containing a program of instructions executable by the machine to perform a document search; (A document management system for searching a database of document images.

USE - For managing and searching large document databases. in particular, where documents can not be identified by simple text based searches, e.g. where images may be scanned images of hardcopy documents or images derived from Portable Document Formats or Postscript (RTM).

ADVANTAGE - The addition of a **search** engine based on **document layout** can improve the speed of **searches** , improving the process of searching, summarizing, sorting and transmitting documents. The analysis of a page to determine attributes does not rely on character recognition or any understanding of the page or document textual content.

DESCRIPTION OF DRAWING(S) - The figure illustrates the manner in which document image data is arranged in the file system.
Document page image ((238) **Layout** objects ((240) Attributes. ((226)
pp; 42 DwgNo 3/25
Title Terms: DOCUMENT; IMAGE; DATABASE; SEARCH; METHOD; MANAGE; SEARCH; DOCUMENT; **LAYOUT** ; ATTRIBUTE; GENERATE; PAGE; DOCUMENT; SEARCH; CRITERIA
Derwent Class: T01
International Patent Class (Main): G06K-009/54; G06T-011/60
International Patent Class (Additional): **G06F-017/30** ; G06T-001/00; G06T-007/00
File Segment: EPI

7/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012727694 **Image available**
WPI Acc No: 1999-533807/199945
XRPX Acc No: N99-396512
Search apparatus for hierarchical search of document image - includes motif hue document image search section and sensitivity document image search section for searching motif hue document image and sensitivity document image, respectively
Patent Assignee: FUJI XEROX CO LTD (XERF)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 11232288	A	19990827	JP 9831069	A	19980213	199945	B

Priority Applications (No Type Date): JP 9831069 A 19980213
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11232288	A		12	G06F-017/30	

Abstract (Basic): JP 11232288 A
NOVELTY - Composition document image search section (10) searches composition document image (11) with composition corresponding to sensitivity of search word within search document image. Hue document image search section (20) searches hue document image (21a) with hue corresponding to search word within hue composition (21). DETAILED DESCRIPTION - Motif **layout** **document** image (31a) is **searched** with motif **layout** of search word within motif **layout** composition (31). Motif hue document image search section (40) searches motif hue document image (41a) with motif hue of search word within motif hue composition (41). Sensitivity document image (51a) is then searched with column corresponding to search word within column composition.
USE - For hierarchical search of document image.
ADVANTAGE - Since search is in accord with search on interactive target is enabled, improvement in search efficiency and search accuracy is achieved. DESCRIPTION OF DRAWING(S) - The figure shows theoretical diagram of search apparatus. (10) Composition document image search section; (11) Composition document image; (20) Hue document image search section; (21) Hue composition; (21a) Hue document image; (31) Motif **layout** composition; (31a) Motif **layout** document image; (40) Motif hue document image search section; (41) Motif hue composition; (41a) Motif hue document image; (51a) Sensitivity document image.
Dwg.1/18
Title Terms: SEARCH; APPARATUS; HIERARCHY; SEARCH; DOCUMENT; IMAGE; MOTIF; HUE; DOCUMENT; IMAGE; SEARCH; SECTION; SENSITIVE; DOCUMENT; IMAGE; SEARCH ; SECTION; SEARCH; MOTIF; HUE; DOCUMENT; IMAGE; SENSITIVE; DOCUMENT; IMAGE; RESPECTIVE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
International Patent Class (Additional): G06T-001/00
File Segment: EPI

7/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012055171 **Image available**
WPI Acc No: 1998-472082/199841
XRPX Acc No: N98-368385
Information processor for word processor, DTP, PC, electronic translator - compares layout **information specified by input search condition with** layout **information stored in memory and applies corresponding** layout **to input document**
Patent Assignee: SHARP KK (SHAF)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10198695	A	19980731	JP 973405	A	19970113	199841	B

Priority Applications (No Type Date): JP 973405 A 19970113
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10198695	A		9	G06F-017/30	

Abstract (Basic): JP 10198695 A
The information processor accepts document information through an input unit like a pen (20). The input document is stored in memory and a **layout** information generator generates the corresponding document **layout** information which is also stored in a memory.
A search condition **layout** information unit initiates a search operation. The **layout** information specified by input **search** condition is compared with the **document layout** information in the memory and the corresponding **layout** is applied to the document.
ADVANTAGE - Simplifies document research.
Dwg.1/12
Title Terms: INFORMATION; PROCESSOR; WORD; PROCESSOR; ELECTRONIC; TRANSLATION; COMPARE; **LAYOUT** ; INFORMATION; SPECIFIED; INPUT; SEARCH; CONDITION; **LAYOUT** ; INFORMATION; STORAGE; MEMORY; APPLY; CORRESPOND; **LAYOUT** ; INPUT; DOCUMENT
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
International Patent Class (Additional): **G06F-017/21**
File Segment: EPI

7/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012006901 **Image available**
WPI Acc No: 1998-423811/199836
XRPX Acc No: N98-331108
Document filing apparatus for wordprocessor - has second calculation unit to calculate priority of search result in text search unit, each time search demand is input, and relative character size
Patent Assignee: FUJI XEROX CO LTD (XERF)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10177641	A	19980630	JP 96338319	A	19961218	199836	B

Priority Applications (No Type Date): JP 96338319 A 19961218
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10177641	A		6	G06T-001/00	

Abstract (Basic): JP 10177641 A
The apparatus stores documents as image data in a database (4). A search demand input unit (5) receives a search demand. A text search

unit (6) searches the document image database according to the search demand. An extract unit (1) extracts the text area from the document. A character recognition unit (2) recognizes the character included in the extracted text area and outputs a character coding row and size of each character. A first calculation unit (3) calculates the relative size of each recognized character.

The database matches and stores the document image, the character coding row and the relative character size. A second calculation unit (7) calculates the priority of the search result in the text search unit and the relative character size. A search result output unit (8) outputs the search result according to priority.

ADVANTAGE - Displays **documents** using multiple **layouts** . Performs **search** easily.

Dwg.1/8

Title Terms: DOCUMENT; FILE; APPARATUS; SECOND; CALCULATE; UNIT; CALCULATE; PRIORITY; SEARCH; RESULT; TEXT; SEARCH; UNIT; TIME; SEARCH; DEMAND; INPUT ; RELATIVE; CHARACTER; SIZE

Derwent Class: T01

International Patent Class (Main): G06T-001/00

International Patent Class (Additional): **G06F-017/30**

File Segment: EPI

7/5/8 (Item 8 from file: 350)

011738873 **Image available**

WPI Acc No: 1998-155783/199814

XRPX Acc No: N98-124409

Document filing apparatus which electronically processes document data - has logic structure extractor that duplicates layout **of logic structure unit during reuse of** document **and whose** layout **duplication information are** matched **and stored in database by structurising information generator**

Patent Assignee: NEC CORP (NIDE)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10027237	A	19980127	JP 96197031	A	19960708	199814	B

Priority Applications (No Type Date): JP 96197031 A 19960708

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10027237	A		8	G06T-001/00	

Abstract (Basic): JP 10027237 A

The apparatus has a data entry device (1) that outputs document data showing an image, after reading a document. A **layout** information extractor (2) obtains the **layout** information on each character in the scanned document based on the document data output. A character recognising circuit (3) identifies each character in the document and outputs a character code according to the document data output.

A logic structure unit e.g. paragraph existing in the document is obtained by a logic structure extractor (4) based on the extracted **layout** information and character code. The logic structure extractor specifies various logic structure units. During the reuse of the document, the **layout** of the extracted logic structure unit is duplicated by the logic structure extractor based on the character code existing in the logic structure unit. The obtained **layout** duplication information are matched and stored in a database (6) by a structurising information generator (5).

ADVANTAGE - Enables duplicating original **layout** during reuse of document even if character in document is coded. Reduces storage capacity of database since size of stored data is decreased.

Dwg.1/9

Title Terms: DOCUMENT; FILE; APPARATUS; ELECTRONIC; PROCESS; DOCUMENT; DATA ; LOGIC; STRUCTURE; EXTRACT; DUPLICATE; **LAYOUT** ; LOGIC; STRUCTURE; UNIT;

REUSE; DOCUMENT; **LAYOUT** ; DUPLICATE; INFORMATION; MATCH; STORAGE; DATABASE; STRUCTURE; INFORMATION; GENERATOR

Derwent Class: T01

International Patent Class (Main): G06T-001/00

International Patent Class (Additional): **G06F-017/21** ; **G06F-017/30** ; G06F-019/00

File Segment: EPI

15/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009166454 **Image available**
WPI Acc No: 1992-293888/199236
Related WPI Acc No: 1992-292693
XRPX Acc No: N92-225137
Full tex document database search **system - provides hierarchical presearch type document retrieval incorporating component character table creation and** search **facilities for term** searching **and full document retrieval**
Patent Assignee: HITACHI LTD (HITA)
Inventor: ASAKAWA S; FUJISAWA H; HATAKEYAMA A; KATO K; KAWAGUCHI H; MINEGISHI N; TADA K
Number of Countries: 005 Number of Patents: 011
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 501416	A2	19920902	EP 92103168	A	19920225	199236 B
EP 501416	A3	19940105	EP 92103168	A	19920225	199516
US 5469354	A	19951121	US 90555483	A	19900809	199601
			US 92843162	A	19920228	
EP 501416	B1	20000510	EP 92103168	A	19920225	200027
DE 69231013	E	20000615	DE 631013	A	19920225	200036
			EP 92103168	A	19920225	
JP 2001202388	A	20010727	JP 9158311	A	19910228	200148
			JP 2000375505	A	19910228	
JP 3220865	B2	20011022	JP 9158311	A	19910228	200169
JP 2001344282	A	20011214	JP 9158311	A	19910228	200214
			JP 200164336	A	19910228	
JP 3263963	B2	20020311	JP 91342695	A	19911225	200220
JP 3303881	B2	20020722	JP 9158311	A	19910228	200254
			JP 200164336	A	19910228	
JP 3376996	B2	20030217	JP 9158311	A	19910228	200316
			JP 2000375505	A	19910228	

Priority Applications (No Type Date): JP 91342695 A 19911225; JP 9158311 A 19910228; JP 2000375505 A 19910228; JP 200164336 A 19910228
Cited Patents: No-SR.Pub; 1.Jnl.Ref; EP 437615; JP 63198124; WO 9016036
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 501416	A2	E	128	G06F-015/403	
Designated States (Regional): DE FR GB					
EP 501416	A3			G06F-015/403	
US 5469354	A		99	G06F-017/21	CIP of application US 90555483
					CIP of patent US 5168533
EP 501416	B1	E		G06F-017/30	
Designated States (Regional): DE FR GB					
DE 69231013	E			G06F-017/30	Based on patent EP 501416
JP 2001202388	A		24	G06F-017/30	Div ex application JP 9158311
JP 3220865	B2		19	G06F-017/30	Previous Publ. patent JP 4274557
JP 2001344282	A		27	G06F-017/30	Div ex application JP 9158311
JP 3263963	B2		36	G06F-017/30	Previous Publ. patent JP 5174064
JP 3303881	B2		27	G06F-017/30	Div ex application JP 9158311
					Previous Publ. patent JP 2001344282
JP 3376996	B2		22	G06F-017/30	Div ex application JP 9158311
					Previous Publ. patent JP 2001202388

Abstract (Basic): EP 501416 A
Condensed texts (104) are created by **decomposing** textual character strings and checked to eliminate duplicate character strings. A component character table (105) registers characters occuring in each condensed text. The condensed texts and table are held in database together with texts of documents to be registered.
Upon retrieval, a component character table **search** is followed by a condensed text **search** to extract documents corresponding to condensed texts containing requested fragmental character strings. A text body **search** then extracts a document against a **query** condition

imposed on a **search** term.
USE/ADVANTAGE - **Search** and retrieval of full text on basis of designated character string. Fast retrieval processing operates on hiragana, kanji and other character strings.
Dwg.1/68
Title Terms: FULL; TEX; DOCUMENT; DATABASE; **SEARCH** ; SYSTEM; HIERARCHY; TYPE; DOCUMENT; RETRIEVAL; INCORPORATE; COMPONENT; CHARACTER; TABLE; CREATION; **SEARCH** ; FACILITY; TERM; **SEARCH** ; FULL; DOCUMENT; RETRIEVAL
Index Terms/Additional Words: **HIRIGA NA_KAN JIFull** ; KANJI
Derwent Class: T01
International Patent Class (Main): G06F-015/403; **G06F-017/21** ; **G06F-017/30**
International Patent Class (Additional): **G06F-017/40**
File Segment: EPI

15/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

007977746 **Image available**
WPI Acc No: 1989-242858/198934
XRPX Acc No: N89-185127
Multi-element document editing method - deriving relationships between and determining layout of different elements **and processing document in accordance with layout**
Patent Assignee: TOSHIBA KK (TOKE)
Inventor: DOI M; FUKUI M; IWAI I; TAKEBAYASHI Y; FUKUI ; IWAI S; TAKEBAYASY
Number of Countries: 004 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 328900	A	19890823	EP 89101096	A	19890123	198934	B
US 5179650	A	19930112	US 89299337	A	19890123	199305	
			US 91670481	A	19910315		
			US 92860119	A	19920331		
EP 328900	A3	19920102	EP 89101096	A	19890123	199320	
EP 328900	B1	19970326	EP 89101096	A	19890123	199717	
DE 68927897	E	19970430	DE 627897	A	19890123	199723	
			EP 89101096	A	19890123		

Priority Applications (No Type Date): JP 889586 A 19880121
Cited Patents: No-SR.Pub; 1.Jnl.Ref; EP 250677; JP 60136861
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 328900	A	E	24		
Designated States (Regional): DE FR GB					
US 5179650	A		23	G06F-015/20	Cont of application US 89299337
					Cont of application US 91670481
EP 328900	B1	E	27	G06F-017/21	
Designated States (Regional): DE FR GB					
DE 68927897	E			G06F-017/21	Based on patent EP 328900

Abstract (Basic): EP 328900 A
The method includes the steps of extracting characteristic quantities which characterises **different elements** of the document, deriving relationships among the **different elements** of the document in accordance with the characteristic quantities, determining layout of the **different elements** of the document in accordance with the relationships, and processing document in accordance with the layout.
physical characteristics, structural characteristics, and denotative characteristics. The relationships includes at least one of physical relationships, structural relationships, denotative relationships, and referential relationships.
ADVANTAGE - Produces satisfactorily well ordered document automatically. (24pp Dwg.No. 1/20
Title Terms: MULTI; ELEMENT; DOCUMENT; EDIT; METHOD; DERIVATIVE; RELATED; DETERMINE; LAYOUT; ELEMENT; PROCESS; DOCUMENT; ACCORD; LAYOUT
Derwent Class: T01

International Patent Class (Main): G06F-015/20; G06F-017/21
International Patent Class (Additional): G06T-011/60
File Segment: EPI

15/5/3 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO

02286380 **Image available**
IMAGE DATA PROCESSING UNIT

PUB. NO.: 62-203280 [JP 62203280 A]
PUBLISHED: September 07, 1987 (19870907)
INVENTOR(s): ASABA SHOJI
APPLICANT(s): MATSUSHITA GRAPHIC COMMUN SYST INC [330729] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 61-045593 [JP 8645593]
FILED: March 03, 1986 (19860303)
INTL CLASS: [4] G06F-015/62
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JOURNAL: Section: P, Section No. 670, Vol. 12, No. 62, Pg. 10, February 25, 1988 (19880225)

ABSTRACT

PURPOSE: To prevent picture data of an overlapped part from being managed overlappedly in block segmentation by **splitting** plural overlapped blocks into plural blocks having no overlapping for management.

CONSTITUTION: Plural blocks are **split** into small blocks having no overlapping based on a detection signal from an overlapping detection section 33 and position information from a position information memory 31 and the result is subjected to **document layout** by a block **splitting** /forming section 34, and an output selection section 35 selecting whether simle block information is outputted in response to an output from the section 33 or the **split** block information is outputted is provided. Then the form of overlapping is checked based on the position information of the block, and the plural blocks are **split** into small blocks having no overlapping in **matching** with the type of overlapping and the proper **document layout** is decided. Moreover, a prescribed small block is assigned to a prescribed position of the **document layout** and formed.

15/5/4 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO

01019683 **Image available**
BUFFER MANAGING SYSTEM

PUB. NO.: 57-169983 [JP 57169983 A]
PUBLISHED: October 19, 1982 (19821019)
INVENTOR(s): NAKADA TERUO
SATO HIDEKI
IZUMIDA YOSHIO
APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 56-048541 [JP 8148541]
FILED: March 31, 1981 (19810331)
INTL CLASS: [3] G11C-009/06; G06F-013/00
JAPIO CLASS: 45.2 (INFORMATION PROCESSING -- Memory Units)
JOURNAL: Section: P, Section No. 169, Vol. 07, No. 15, Pg. 96, January 21, 1983 (19830121)

ABSTRACT

PURPOSE: To increase the buffer **search** speed, by dividing a buffer CUE into various types and controlling buffers **split** into an assembly of the buffer CUE.

CONSTITUTION: A bash processing section 1 of a main storage according to the page number makes a specified function calculation, determines the entry address, accesses a hash table 2 and reads out the corresponding entry. Then, CUEs 13-17 according to the entry are selected with a FREE circuit 12 making transfer control of buffers unnecessary for the presence of the main storage, a GET circuit 10 transferring a disuse buffer area 4, and a PUT circuit 11 making effective for the renewal, via a non-use buffer CUE head location information 9, when the allocation and **designated page** to buffer CUEs 13, 16 for renewal in reference, non-renewal in reference, renewal in non-reference, and non-renewal in non-reference, of a buffer area 3 in use for various types **split** via head location information storage sections 5-8 is not in the main storage section and the buffer in partial set is controlled at each CUE. Thus, the **search** for unnecessary part is not made and the **search** speed can be increased.

```
Set     Items   Description
S1    3249565   SEARCH? OR SEEK? OR QUER? OR FIND? OR MATCH?
S2       5576   (DATA()ELEMENT? OR PAGE? OR DOCUMENT?)(N)(LAYOUT? ? OR LAY-
                 ()OUT? OR DESIGN OR DESIGNS OR DESIGNED OR ARRANGEMENT?)
S3         90   (ARRANG? OR LAYOUT? OR LAY()OUT? OR DESIGN?)(2N)(TEXT(2N)(-
                 IMAGE? OR PICTURE?))
S4     907320   DECOMPOS? OR DECONSTRUCT? OR DISASSEMB? OR REASSEMB? OR DE-
                 ASSEMB? OR SPLIT? OR BREAK?()(UP OR DOWN)
S5      49969   (DIFFERENT? OR SEPARATE? OR VARIOUS? OR VARIET?)(2N)(ELEME-
                 NT? OR DATATYPE? OR DATA()TYPE?)
S6     133439   LAYOUT? OR LAY()OUT? ?
S7         28   S1 AND (S2 OR S3) AND (S4 OR S5)
S8         54   S1(3N)(S2 OR S3)
S9        898   S1(2N)S6
S10        75   S9 AND (DOCUMENT? OR PAGE? OR DATATYPE? OR DATA()(TYPE OR -
                 ELEMENT?) OR DATAELEMENT?)
S11        18   S8 AND S6
S12        82   S11 OR S8 OR S7
S13        68   RD (unique items)
S14        51   S13 NOT PY>2000
S15        50   S14 NOT PD>20000215
File   8:Ei Compendex(R) 1970-2003/Dec W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2003/Nov
         (c) 2003 ProQuest Info&Learning
File 202:Info. Sci. & Tech. Abs. 1966-2003/Nov 17
         (c) 2003 EBSCO Publishing
File  65:Inside Conferences 1993-2003/Dec W3
         (c) 2003 BLDSC all rts. reserv.
File   2:INSPEC 1969-2003/Dec W1
         (c) 2003 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2003/Dec W3
         (c)2003 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2003/Dec 22
         (c) 2003 The Gale Group
File 233:Internet & Personal Comp. Abs. 1981-2003/Jul
         (c) 2003, EBSCO Pub.
File 144:Pascal 1973-2003/Dec W2
         (c) 2003 INIST/CNRS
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Dec W3
         (c) 2003 Inst for Sci Info
File  62:SPIN(R) 1975-2003/Nov W1
         (c) 2003 American Institute of Physics
File  99:Wilson Appl. Sci & Tech Abs 1983-2003/Nov
         (c) 2003 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2003/Dec W1
         (c) 2003 FIZ TECHNIK
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Set     Items   Description
S1    3249565   SEARCH? OR SEEK? OR QUER? OR FIND? OR MATCH?
S2       5576   (DATA()ELEMENT? OR PAGE? OR DOCUMENT?)(N)(LAYOUT? ? OR LAY-
                 ()OUT? OR DESIGN OR DESIGNS OR DESIGNED OR ARRANGEMENT?)
S3         90   (ARRANG? OR LAYOUT? OR LAY()OUT? OR DESIGN?)(2N)(TEXT(2N)(-
                 IMAGE? OR PICTURE?))
S4     907320   DECOMPOS? OR DECONSTRUCT? OR DISASSEMB? OR REASSEMB? OR DE-
                 ASSEMB? OR SPLIT? OR BREAK?()(UP OR DOWN)
S5      49969   (DIFFERENT? OR SEPARATE? OR VARIOUS? OR VARIET?)(2N)(ELEME-
                 NT? OR DATATYPE? OR DATA()TYPE?)
S6     133439   LAYOUT? OR LAY()OUT? ?
S7         28   S1 AND (S2 OR S3) AND (S4 OR S5)
S8         54   S1(3N)(S2 OR S3)
S9        898   S1(2N)S6
S10        75   S9 AND (DOCUMENT? OR PAGE? OR DATATYPE? OR DATA()(TYPE OR -
                 ELEMENT?) OR DATAELEMENT?)
S11        18   S8 AND S6
S12        82   S11 OR S8 OR S7
S13        68   RD (unique items)
S14        51   S13 NOT PY>2000
S15        50   S14 NOT PD>20000215
File   8:Ei Compendex(R) 1970-2003/Dec W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2003/Nov
         (c) 2003 ProQuest Info&Learning
File 202:Info. Sci. & Tech. Abs. 1966-2003/Nov 17
         (c) 2003 EBSCO Publishing
File  65:Inside Conferences 1993-2003/Dec W3
         (c) 2003 BLDSC all rts. reserv.
File   2:INSPEC 1969-2003/Dec W1
         (c) 2003 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2003/Dec W3
         (c)2003 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2003/Dec 22
         (c) 2003 The Gale Group
File 233:Internet & Personal Comp. Abs. 1981-2003/Jul
         (c) 2003, EBSCO Pub.
File 144:Pascal 1973-2003/Dec W2
         (c) 2003 INIST/CNRS
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Dec W3
         (c) 2003 Inst for Sci Info
File  62:SPIN(R) 1975-2003/Nov W1
         (c) 2003 American Institute of Physics
File  99:Wilson Appl. Sci & Tech Abs 1983-2003/Nov
         (c) 2003 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2003/Dec W1
         (c) 2003 FIZ TECHNIK
```

```
Set     Items   Description
S1    3249565   SEARCH? OR SEEK? OR QUER? OR FIND? OR MATCH?
S2       5576   (DATA()ELEMENT? OR PAGE? OR DOCUMENT?)(N)(LAYOUT? ? OR LAY-
                 ()OUT? OR DESIGN OR DESIGNS OR DESIGNED OR ARRANGEMENT?)
S3         90   (ARRANG? OR LAYOUT? OR LAY()OUT? OR DESIGN?)(2N)(TEXT(2N)(-
                 IMAGE? OR PICTURE?))
S4     907320   DECOMPOS? OR DECONSTRUCT? OR DISASSEMB? OR REASSEMB? OR DE-
                 ASSEMB? OR SPLIT? OR BREAK?()(UP OR DOWN)
S5      49969   (DIFFERENT? OR SEPARATE? OR VARIOUS? OR VARIET?)(2N)(ELEME-
                 NT? OR DATATYPE? OR DATA()TYPE?)
S6     133439   LAYOUT? OR LAY()OUT? ?
S7         28   S1 AND (S2 OR S3) AND (S4 OR S5)
S8         54   S1(3N)(S2 OR S3)
S9        898   S1(2N)S6
S10        75   S9 AND (DOCUMENT? OR PAGE? OR DATATYPE? OR DATA()(TYPE OR -
                 ELEMENT?) OR DATAELEMENT?)
S11        18   S8 AND S6
S12        82   S11 OR S8 OR S7
S13        68   RD (unique items)
S14        51   S13 NOT PY>2000
S15        50   S14 NOT PD>20000215
File   8:Ei Compendex(R) 1970-2003/Dec W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2003/Nov
         (c) 2003 ProQuest Info&Learning
File 202:Info. Sci. & Tech. Abs. 1966-2003/Nov 17
         (c) 2003 EBSCO Publishing
File  65:Inside Conferences 1993-2003/Dec W3
         (c) 2003 BLDSC all rts. reserv.
File   2:INSPEC 1969-2003/Dec W1
         (c) 2003 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2003/Dec W3
         (c)2003 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2003/Dec 22
         (c) 2003 The Gale Group
File 233:Internet & Personal Comp. Abs. 1981-2003/Jul
         (c) 2003, EBSCO Pub.
File 144:Pascal 1973-2003/Dec W2
         (c) 2003 INIST/CNRS
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Dec W3
         (c) 2003 Inst for Sci Info
File  62:SPIN(R) 1975-2003/Nov W1
         (c) 2003 American Institute of Physics
File  99:Wilson Appl. Sci & Tech Abs 1983-2003/Nov
         (c) 2003 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2003/Dec W1
         (c) 2003 FIZ TECHNIK
```

(Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04812532 E.I. No: EIP97093813635
Title: Chinese document layout **analysis based on adaptive** split **-and-merge and qualitative spatial reasoning**
Author: Liu, Jiming; Tang, Yuan Y.; Suen, Ching Y.
Corporate Source: Hong Kong Baptist Univ, Hong Kong
Source: Pattern Recognition v 30 n 8 Aug 1997. p 1265-1278
Publication Year: 1997
CODEN: PTNRA8 ISSN: 0031-3203
Language: English
Document Type: JA; (Journal Article) Treatment: T; (Theoretical)
Journal Announcement: 9710W5
Abstract: The ultimate goal of automatic document processing is to understand the semantics of a document. Towards such an end, one of the primary enabling steps has been to first reason about the layout of the document by means of page segmentation and segment spatial reasoning or labeling. This, in turn, allows for the derivation of document logical organization. This paper describes a generic document segmentation and geometric relation labeling method with applications to Chinese document analysis. Unlike the previous document segmentation methods where text spacing, border lines, and/or a priori layout models based on template **matching** processing are performed, the present method begins with a hierarchy of partitioned image layers where inhomogeneous higher-level regions are recursively partitioned into lower-level rectangular subregions and at the same time lower-level smaller homogeneous regions are merged into larger homogeneous regions. Furthermore, the derived segment data structure readily enables efficient **search** for geometric relationships between identified document segments. (Author abstract) 33 Refs.
Descriptors: *Optical character recognition; Image segmentation; Algorithms; Image analysis; Data structures; Merging
Identifiers: **Document layout** analysis; Geometric relation labeling method
Classification Codes:
741.1 (Light/Optics); 723.2 (Data Processing)
741 (Optics & Optical Devices); 723 (Computer Software); 921 (Applied Mathematics)
74 (OPTICAL TECHNOLOGY); 72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

01600269 ORDER NO: AAD98-03179

THE MANAGEMENT OF DESIGN INFORMATION: A DECISION-ANALYTIC APPROACH (SMART DRAWINGS)

Author: DONG, ANDY AN-SI
Degree: PH.D.
Year: 1997
Corporate Source/Institution: UNIVERSITY OF CALIFORNIA, BERKELEY (0028)
Chair: ALICE M. AGOGINO
Source: VOLUME 58/07-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 3880. 249 PAGES
Descriptors: ENGINEERING, MECHANICAL ; INFORMATION SCIENCE ;
ENGINEERING, INDUSTRIAL
Descriptor Codes: 0548; 0723; 0546

This dissertation describes the development of the Mechanical Design Language Interpreter, an autonomous decision-making system that is situated in dynamic design environments over extended periods of time and entrusted with the task of managing and retrieving design information. The system orchestrates information resource management in collaborative design by employing a design information infrastructure consisting of "smart drawings" and a decision-analytic machinery enriched with a learned model of the design. The system learns an extensional model of the mechanical by processing, over the lifetime of the design cycle, streams of information communicated by the designers in the form of full-text documentation. The analytical machinery of decision-making uses the measure of expected value of perfect information (EVPI) to make design-time decisions about the ideal questions to pose of the system to optimize the retrieval of useful information.

The fundamental proposition of this research program focuses on constructing a formal methodology to learn an approximate textual model of the design and to perform inference over that model to ascertain the functional specification and **decomposition** of the design. The model permits the agent to engage in an effective dialogue with the designers. To build the model, the general goal is to extract relationships between the features and functions of the design from documents generated by the engineers. Inferring relationships between the features binds together disparate pieces of information comprising the design, into complex **design documents** called "smart drawings." The system includes: a natural language processing component which parses **design documents** into keywords or phrases; a clustering algorithm which organizes the keywords or phrases into groups which describe principal features of the design; techniques for applying belief networks to the task of learning the **decomposition** of the design and inferring the mutual impact of components or functions of the design; and an expected value of perfect information engine to augment retrieval requests by identifying the most valuable **search** variables.

By learning the content of **design documents** and assisting engineers in understanding the design through semi-autonomous interpretation of information, the mechanical design language interpreter fits into a part of a larger computer-supported collaborative work enterprise supporting incremental addition of content, interaction with the user and with other tools, and reuse of content according to the preferences of the engineer.

01473738 ORDER NO: AADAA-I9609607

DOCUMENT LAYOUT **ANALYSIS USING RECURSIVE MORPHOLOGICAL TRANSFORMS (TEXT SKEW, WORD SEGMENTATION, OBJECT SPATIAL ANALYSIS)**

Author: CHEN, SU
Degree: PH.D.
Year: 1995
Corporate Source/Institution: UNIVERSITY OF WASHINGTON (0250)
Chairperson: ROBERT M. HARALICK
Source: VOLUME 56/12-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 6940. 202 PAGES
Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL ; COMPUTER SCIENCE
Descriptor Codes: 0544; 0984

The aim of this study is to apply solid statistical methods to systematically model and extract various layout structures on document images, such as words, text lines and text blocks.

We first establish the computation theory of the recursive morphological transforms, namely the recursive erosion transform, the recursive dilation transform, the recursive opening transform, and the recursive closing transform. The transforms serve as a set of powerful tools for the document image shape analysis.

Then we describe our efforts to construct a series of carefully ground-truthed document image databases, such as the UW English document image database (I). The database offers a platform based on which we can develop, train and evaluate our **document layout** analysis system.

We present three sub-components of our **document layout** analysis system. They are the text skew estimation, the word segmentation, and the object spatial analysis:

The text skew estimation **finds** the text skew angle of a document image. We develop an automatic text skew estimation algorithm using the recursive opening and closing transforms. It computes the estimated text skew angles which are within 0.5$\sp\circ$ of the true text skew angles with a probability of 0.95 on real images.

The word segmentation detects all the words on a document image. We describe a word segmentation algorithm that utilizes the recursive closing transform. We derive the quantitative measures, such as the rates of miss, false, correct, **splitting** , merging and spurious detections, to evaluate its performance. The results show that the algorithm correctly detects the words on a document image at a rate of about 95%.

The object spatial analysis treats the detected words as atomic and employs a probabilistic linear displacement model (PLDM) and an augmented PLDM model to model and extract the text lines and text blocks in a document image. By gathering statistics from a large population of document images, we are able to validate our models and determine the proper model parameters. The correct text line and text block detection rates are about 92% and 81% respectively.

15/5/21 (Item 2 from file: 2)
DIALOG(R)File 2:INSPEC

6240820 INSPEC Abstract Number: C1999-06-7240-016
Title: Index design for structured documents based on abstraction
Author(s): Chow, J.-H.; Cheng, J.; Chang, D.; Xu, J.
Author Affiliation: Database Technol. Inst., IBM Santa Teresa Lab., San Jose, CA, USA
Conference Title: Proceedings. 6th International Conference on Advanced Systems for Advanced Applications p.89-96
Editor(s): Chen, A.L.P.; Lochovsky, F.H.
Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
Publication Date: 1999 Country of Publication: USA xii+356 pp.
ISBN: 0 7695 0084 6 Material Identity Number: XX-1999-01043
U.S. Copyright Clearance Center Code: 0 7695 0084 6/99/$10.00
Conference Title: Proceedings. 6th International Conference on Database Systems for Advanced Applications
Conference Sponsor: Nat. Tsing Hua Univ.; Nat. Sci. Council; Minstr. Educ.; Inf. Process. Soc. Japan
Conference Date: 19-21 April 1999 Conference Location: Hsinchu, Taiwan
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P)
Abstract: HTML has so far been the standard format for delivering information on the World Wide Web. However, automated information processing of these documents for data exchange and interoperability has been difficult. XML, a subset of SGML, has been proposed to be the next standard format, that allows user-defined tags for better describing nested document structures and associated semantics. Operations on structured documents, such as searching in nested document structures, require new functions that are not currently available on most systems today. We describe a general framework for manipulating structured documents based on document abstractions. An abstraction is an approximation of an actual document, while possessing useful properties for analyses of interest. The framework provides a wide design space for the tradeoff between cost and capability. This general framework can be applied to index **design** , **document** **searching** and categorization. We present this framework by focusing on the indexing and searching of structured documents in the XML domain, and prove their soundness. We also address the issue of rich data types in XML documents. (23 Refs)
Subfile: C
Descriptors: electronic data interchange; indexing; information resources ; open systems; page description languages
Identifiers: index design; structured documents; document abstractions; HTML; World Wide Web; automated information processing; data exchange; interoperability; XML; SGML subset; standard format; user-defined tags; nested document structures; semantics; document searching; design space; cost-capability tradeoff; document categorization; soundness; rich data types
Class Codes: C7240 (Information analysis and indexing); C6130D (Document processing techniques); C6140D (High level languages); C7210N (Information networks)

15/5/31 (Item 4 from file: 94)
DIALOG(R)File 94:JICST-EPlus

01002455 JICST ACCESSION NUMBER: 90A0328104 FILE SEGMENT: JICST-E
Document image retricval system LaySearch.
NISHIMURA YASUSHI (1); TAKAHASHI TOMOICHI (1); KISHINO FUMIO (1)
(1) ATR Communication Systems Res. Labs.
Hyuman, Intafesu, Shinpojiumu Ronbunshu(Human Interface), 1989, VOL.5th, PAGE.469-474, FIG.6, TBL.3, REF.5
JOURNAL NUMBER: Z0307BAK ISSN NO: 0912-3482
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:061.68
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Conference Proceeding
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: A document image database system called LaySearch (**Layout** Based Image Search System), which allows retrieval by document **layout** is introduced. The system is featured by (a) traphical user interface which assists the user's cut and try porcess in finding a document image and (b) **layout** model which enables various kinds of **queries** on **document** **layout** . The system enables a user to make clear the **layout** he wants, through browsing the whole database with no concern on the query procedure. The query is automatically processed by analysing the **layout** model. The system will provide a mean for retrieving by **layout** at personal document databases and retrieving and reusing **layouts** at desk top publishing systems. (author abst.)
DESCRIPTORS: **layout** ; document; image; database; information retrieval; DBMS; recall precision; computer file; interface; man-machine system; information retrieval system; tree structure
BROADER DESCRIPTORS: resource(document); retrieval; computer application system; system; efficiency; information system; structure
CLASSIFICATION CODE(S): JD03030U

15/5/42 (Item 2 from file: 144)
DIALOG(R)File 144:Pascal

14113045 PASCAL No.: 99-0308402
A customizable layout **-driven approach to querying digital libraries**
Multimedia computing and networking 1999 : San Jose CA, 25-27 January 1999
CRUZ I F; LUCAS W T
KANDLUR Dilip D, ed; JEFFAY Kevin, ed; ROSCOE Timothy, ed
Worcester Polytechnic Institute, Computer Science Department, 100 Institute Rd., Worcester, MA 01609-2280, United States
International Society for Optical Engineering, Bellingham WA, United States.
Multimedia computing and networking. Conference (San Jose CA USA) 1999-01-25
Journal: SPIE proceedings series, 1998, 3654 122-134
ISBN: 0-8194-3125-7 ISSN: 1017-2653 Availability: INIST-21760; 354000084602560110
No. of Refs.: 21 ref.
Document Type: P (Serial); C (Conference Proceedings) ; A (Analytic)
Country of Publication: United States
Language: English
In widely available multimedia digital libraries, querying, browsing, and displaying data pose new challenges given the diversity of the applications, of the users, and of the data. We address some of these challenges by tightly integrating querying with user-defined data presentation and by supporting browsing within query-defined groupings of the multimedia objects. Groupings use efficiently the screen real-estate and enhance the comprehension of the data. The user interface supports virtual document templates for specifying **layout** with associated visual query boxes for specifying document content. By nesting query boxes the user is able to define how the browsing is going to be performed. The visual nesting "drives" the actual querying process and therefore goes beyond the simple specification of the presentation. Examples are provided of the system as used to query the Perseus digital library of classical artifacts.

English Descriptors: Information retrieval systems; Multimedia systems; **Document layout** ; Database **query** ; Visual languages

15/5/44 (Item 4 from file: 144)
DIALOG(R)File 144:Pascal

13182149 PASCAL No.: 97-0445654
The use of document structure analysis to retrieve information from documents in digital libraries
Document recognition IV : San Jose CA, 12-13 February 1997
NIYOGI D; SRIHARI S N
VINCENT Luc M, ed; HULL Jonathan J, ed
Center of Excellence for Document Analysis and Recognition, State University of New York at Buffalo, Buffalo, NY 14228-2567, United States
International Society for Optical Engineering, Bellingham WA, United States.
Document recognition. Conference, 4 (San Jose CA USA) 1997-02-12
Journal: SPIE proceedings series, 1997, 3027 207-218
ISBN: 0-8194-2438-2 ISSN: 1017-2653 Availability: INIST-21760; 354000041063900210
No. of Refs.: 11 ref.
Document Type: P (Serial); C (Conference Proceedings) ; A (Analytic)
Country of Publication: United States
Language: English
This paper describes an approach to retrieving information from document images stored in a digital library by means of knowledge-based **layout** analysis and logical structure derivation techniques. Queries on document image content are categorized in terms of the type of information that is desired (e.g., articles on a given topic), and are parsed to determine the type of document from which information is desired, the syntactic level of the information desired, and the level of analysis required to extract the information. Using these clauses in the query, a set of salient documents are retrieved, **layout** analysis and logical structure derivation are performed on the retrieved documents (using DeLoS, a document logical structure derivation system developed at CEDAR), and the documents are then analyzed in detail to extract the relevant logical components. A "document browsers application, being developed based on this approach, allows an user to interactively specify queries on the documents in the digital library using a graphical user interface, provides feedback about the candidate documents at each stage of the retrieval process, and allows refinements of the query based on the intermediate results of the search. Results of a query are displayed either as an image or as formatted text.

English Descriptors: Document structure; Electronic document management system; Information retrieval; **Document layout** ; Knowledge base; Database **query** ; Document analysis; Digital information; Library; Multimedia

French Descriptors: Structure document; Systeme gestion electronique document; Recherche information; Presentation document; Base connaissance ; Interrogation base donnee; Analyse documentaire; Information numerique; Bibliotheque; Multimedia

Classification Codes: 001A01F03; 001A01H05; 205

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Set      Items   Description
S1     1440100   SEARCH? OR SEEK? OR QUER? OR FIND? OR MATCH?
S2        1946   (DATA()ELEMENT? OR PAGE? OR DOCUMENT?)(N)(LAYOUT? ? OR LAY-
                 ()OUT? OR DESIGN OR DESIGNS OR DESIGNED OR ARRANGEMENT?)
S3         213   (ARRANG? OR LAYOUT? OR LAY()OUT? OR DESIGN?)(2N)(TEXT(2N)(-
                 IMAGE? OR PICTURE?))
S4      244132   DECOMPOS? OR DECONSTRUCT? OR DISASSEMB? OR REASSEMB? OR DE-
                 ASSEMB? OR SPLIT? OR BREAK?()(UP OR DOWN)
S5       52447   (DIFFERENT? OR SEPARATE? OR VARIOUS? OR VARIET?)(2N)(ELEME-
                 NT? OR DATATYPE? OR DATA()TYPE?)
S6       42553   LAYOUT? OR LAY()OUT? ?
S7          70   S1(10N)(S2 OR S3)
S8           3   S1(15N)(S2 OR S3)(S)(S4 OR S5 OR RECONSTRUCT? OR REASSMBL?)
S9         335   S1(2N)S6
S10         60   S9(S)(DATAELEMENT? OR DATA()ELEMENT? ? OR PAGE? OR DOCUMEN-
                 T?)
S11        113   S7 OR S8 OR S10
S12         25   S11 AND IC=G06F-017/30
S13         10   S12 NOT AD>20000215
S14         10   IDPAT (sorted in duplicate/non-duplicate order)
S15         10   IDPAT (primary/non-duplicate records only)
File 348:EUROPEAN PATENTS 1978-2003/Dec W02
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20031218,UT=20031211
         (c) 2003 WIPO/Univentio
```

15/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01474706
Information retrieval system
System zum Wiederauffinden von Informationen
Systeme d'extraction d'informations
PATENT ASSIGNEE:
MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington 98052-6399, (US), (Applicant designated States: all)
INVENTOR:
Ferrel, Patrick J., 5240 21st St., N.E., Seattle, Washington 98105, (US)
Kerr, Randy, 10408 180th Ct., N.E., Redmond, Washington 98052, (US)
Uppala, Krishna, 5612 159th PI., N.E., Redmond, Washington 98052, (US)
Nareddy, Krishna, 14550 N.E. 35th St., Apt. B102, Bellevue, Washington 98007, (US)
LEGAL REPRESENTATIVE:
VOSSIUS & PARTNER (100314), Siebertstrasse 4, 81675 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1251438 A2 021023 (Basic)
APPLICATION (CC, No, Date): EP 2002014802 961115;
PRIORITY (CC, No, Date): US 560281 951117
DESIGNATED STATES: DE; FR; GB
RELATED PARENT NUMBER(S) - PN (AN):
EP 774722 (EP 96118399)
INTERNATIONAL PATENT CLASS: **G06F-017/30**

ABSTRACT EP 1251438 A2
A information retrieval system wherein design and content are separated. Within a section of a title, a designer can layout pages with controls that define areas for content to be inserted into the pages. Two commonly used controls in the system are a static story control, wherein a preselected story is statically placed on a page in the area defined by the control, and a dynamic story control, wherein the designer defines search objects to retrieve stories. An information retrieval (IR) server indexes and searches stories in titles. Indexing takes place when a title is released to the network by a publisher workstation. The IR server interrelates title, section and story objects by their globally unique identifiers and creates a routing table which is used to locate objects across multiple database partitions. The IR search service is requested in two different ways at customer runtime. The first way is the resolution of the search objects to retrieve matching stories. The retrieved stories are concatenated and poured into the area defined by the dynamic control when the title is viewed. In the second way, the IR search service is requested when a search is initiated by a customer using a "find" dialog to search across all stories in one or more titles, both dynamic and static.
ABSTRACT WORD COUNT: 216
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021023 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200243	268
SPEC A	(English)	200243	24394
Total word count - document A			24662
Total word count - document B			0
Total word count - documents A + B			24662

INTERNATIONAL PATENT CLASS: **G06F-017/30**

...SPECIFICATION editor 184 to manage tiles, containers, and objects; a page editor 186 to create and **layout pages** ; a style sheet editor 187 to edit style sheets; a **search** object editor 189 to create search objects; a word processor, such as a MPS Document...

15/5,K/2 **(Item 2 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS

01474705
Information retrieval system
System zum Wiederauffinden von Informationen
Systeme d'extraction d'informations
PATENT ASSIGNEE:
MICROSOFT CORPORATION, (749866), One Microsoft Way, Redmond, WA 98052, (US), (Applicant designated States: all)
INVENTOR:
Ferrel, Patrick J., 5240 21st St., N.E., Seattle, Washington 98105, (US)
Kerr, Randy, 10408 180th Ct., N.E., Redmond, Washington 98052, (US)
Uppala, Krishna, 5612 159th PI., N.E., Redmond, Washington 98052, (US)
Nareddy, Krishna, 14550 N.E. 35th St., Apt. B102, Bellevue, Washington 98007, (US)
LEGAL REPRESENTATIVE:
VOSSIUS & PARTNER (100314), Siebertstrasse 4, 81675 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1251437 A2 021023 (Basic)
APPLICATION (CC, No, Date): EP 2002014801 961115;
PRIORITY (CC, No, Date): US 560281 951117
DESIGNATED STATES: DE; FR; GB
RELATED PARENT NUMBER(S) - PN (AN):
EP 774722 (EP 96118399)
INTERNATIONAL PATENT CLASS: **G06F-017/30**

ABSTRACT EP 1251437 A2
A information retrieval system wherein design and content are separated. Within a section of a title, a designer can layout pages with controls that define areas for content to be inserted into the pages. Two commonly used controls in the system are a static story control, wherein a preselected story is statically placed on a page in the area defined by the control, and a dynamic story control, wherein the designer defines search objects to retrieve stories. An information retrieval (IR) server indexes and searches stories in titles. Indexing takes place when a title is released to the network by a publisher workstation. The IR server interrelates title, section and story objects by their globally unique identifiers and creates a routing table which is used to locate objects across multiple database partitions. The IR search service is requested in two different ways at customer runtime. The first way is the resolution of the search objects to retrieve matching stories. The retrieved stories are concatenated and poured into the area defined by the dynamic control when the title is viewed. In the second way, the IR search service is requested when a search is initiated by a customer using a "find" dialog to search across all stories in one or more titles, both dynamic and static.
ABSTRACT WORD COUNT: 216
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021023 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200243	596
SPEC A	(English)	200243	24361
Total word count - document A			24957
Total word count - document B			0
Total word count - documents A + B			24957

INTERNATIONAL PATENT CLASS: **G06F-017/30**

...SPECIFICATION editor 184 to manage tiles, containers, and objects; a page editor 186 to create and **layout pages** ; a style sheet editor 187

to edit style sheets; a **search** object editor 189 to create search objects; a word processor, such as a MPS Document...

15/5,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01042597
Method and means of matching documents based on spatial region layout
Verfahren und Mittel um Dokumente zu Vergleichen auf der Basis des raumlichen Layouts
Methode et moyens pour la comparaison de documents basee sur la disposition spatiale des regions
PATENT ASSIGNEE:
Xerox Corporation, (219786), Xerox Square - 20A, Rochester, New York 14644, (US), (Proprietor designated states: all)
INVENTOR:
Syeda-Mahmood, Tanveer F., 1 Scarborough Park, Rochester, New York 14625, (US)
LEGAL REPRESENTATIVE:
Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721), Maximilianstrasse 58, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 923044 A2 990616 (Basic)
EP 923044 A3 010627
EP 923044 B1 031217
APPLICATION (CC, No, Date): EP 98121791 981116;
PRIORITY (CC, No, Date): US 975466 971121
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G06K-009/20; **G06F-017/30**
CITED REFERENCES (EP B):
BOHNACKER U ET AL: "Matching form lines based on a heuristic search" PROCEEDINGS OF THE FOURTH INTERNATIONAL CONFERENCE ON DOCUMENT ANALYSIS AND RECOGNITION (CAT. NO.97TB100138), PROCEEDINGS OF THE FOURTH INTERNATIONAL CONFERENCE ON DOCUMENT ANALYSIS AND RECOGNITION, ULM, GERMANY, 18-20 AUG. 1997, pages 86-90 vol.1, XP002165325 1997, Los Alamitos, CA, USA, IEEE Comput. Soc, USA ISBN: 0-8186-7898-4
NIYOGI D ET AL: "AN INTEGRATED APPROACH TO DOCUMENT DECOMPOSITION AND STRUCTURAL ANALYSIS" INTERNATIONAL JOURNAL OF IMAGING SYSTEMS AND TECHNOLOGY,US,WILEY AND SONS, NEW YORK, vol. 7, no. 4, 21 December 1996 (1996-12-21), pages 330-342, XP000637454 ISSN: 0899-9457;

ABSTRACT EP 923044 A2
A method for matching obejcts based on spatial layout of regions based on a shape similarity model for detecting similarity between general 2D objects. The method uses the shape similarity model to determine if two obejcts are similar by logical region generation in which logical regions are automatically derived from information in the obejcts to be matched, region correspondence, in which a correspondence is established between the regions on the obejcts, pose computation in which the individual transforms relating corresponding regions are recovered, and pose verification in which the extent of spatial similarity is measured by projecting one document onto the other using the computed pose parameters. The method of the invention can be carried out in a microprocessor-based system capable of being programmed to carry out the method of the invention.
ABSTRACT WORD COUNT: 133
NOTE:
Figure number on first page: 3A

LEGAL STATUS (Type, Pub Date, Kind, Text):

Change:	010613	A2	International Patent Classification changed: 20010423
Application:	990616	A2	Published application (A1with Search Report ;A2without Search Report)
Grant:	031217	B1	Granted patent
Search Report:	010627	A3	Separate publication of the search report

Examination: 020306 A2 Date of request for examination: 20011227
Examination: 020619 A2 Date of dispatch of the first examination report: 20020507
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	199924	396
CLAIMS B	(English)	200351	583
CLAIMS B	(German)	200351	565
CLAIMS B	(French)	200351	666
SPEC A	(English)	199924	3427
SPEC B	(English)	200351	3664
Total word count - document A			3824
Total word count - document B			5478
Total word count - documents A + B			9302

...INTERNATIONAL PATENT CLASS: **G06F-017/30**

...SPECIFICATION allowed form region pairs, and unary constraints are then applied to the documents in a **layout** shape **matching** module 9 resulting is a matching score between the **documents** .
Referring back to Figures 1A and 2A, illustrated is the logical region grouping for documents...

...SPECIFICATION C. Examples
Referring to Figure 4, a flow chart representing the four major steps of **document** recognition employing the invention, after logical regions of **documents** to be matched are identified. Logical region extraction occurs within the first two blocks where First 1 all region pairs are formed, and then the **documents** are pruned 2 based on unary constraints discussed in further detail below. Region correspondence is then determined between **documents** 3. A pose is computed 4 for the **documents** and match verification is determined based a matching score. Figure 5 is another diagram depicting a more specific scenario where two **documents** (1 and 2) are scanned, and enter a region segmentation module 7 to establish a correspondence between the regions on the **documents** . A logical region grouping module 8 is then allowed form region pairs, and unary constraints are then applied to the **documents** in a **layout** shape **matching** module 9 resulting is a matching score between the **documents** .
Referring back to Figures 1A and 2A, illustrated is the logical region grouping for documents...

15/5,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00836549
Information retrieval system
Informationswiederauffindungssystem
Systeme de recouvrement d'informations
PATENT ASSIGNEE:
MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington 98052-6399, (US), (Proprietor designated states: all)
INVENTOR:
Ferrel, Patrick J., 5240 21st St., N.E., Seattle, Washington 98105, (US)
Kerr, Randy, 10408 180th Ct., N.E., Redmond, Washington98052, (US)
Uppala, Krishna, 5612 159th Pl., N.E., Redmond, Washington 98052, (US)
Nareddy, Krishna, 14550 N.E. 35th St., Apt. B102, Belleuve, Washington 98007, (US)
LEGAL REPRESENTATIVE:
VOSSIUS & PARTNER (100311), Postfach 86 07 67, 81634 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 774722 A2 970521 (Basic)
EP 774722 A3 981202
EP 774722 B1 030122
APPLICATION (CC, No, Date): EP 96118399 961115;
PRIORITY (CC, No, Date): US 560281 951117

DESIGNATED STATES: DE; FR; GB
RELATED DIVISIONAL NUMBER(S) - PN (AN):
EP 1251437 (EP 2002014801)
EP 1251438 (EP 2002014802)
INTERNATIONAL PATENT CLASS: **G06F-017/30**
CITED PATENTS (EP B): EP 622743 A; EP 749081 A

ABSTRACT EP 774722 A2
A information retrieval system wherein design and content are separated. Within a section of a title, a designer can layout pages with controls that define areas for content to be inserted into the pages. Two commonly used controls in the system are a static story control, wherein a preselected story is statically placed on a page in the area defined by the control, and a dynamic story control, wherein the designer defines search objects to retrieve stories. An information retrieval (IR) server indexes and searches stories in titles. Indexing takes place when a title is released to the network by a publisher workstation. The IR server interrelates title, section and story objects by their globally unique identifiers and creates a routing table which is used to locate objects across multiple database partitions. The IR search service is requested in two different ways at customer runtime. The first way is the resolution of the search objects to retrieve matching stories. The retrieved stories are concatenated and poured into the area defined by the dynamic control when the title is viewed. In the second way, the IR search service is requested when a search is initiated by a customer using a "find" dialog to search across all stories in one or more titles, both dynamic and static.
ABSTRACT WORD COUNT: 216
NOTE:
Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Examination:	001122	A2	Date of dispatch of the first examination report: 20001005
Application:	970521	A2	Published application (A1with Search Report ;A2without Search Report)
Grant:	030122	B1	Granted patent
Change:	020306	A2	Title of invention (German) changed: 20020111
Change:	020828	A2	Application number of divisional application (Article 76) changed: 20020705
Change:	970528	A2	Inventor (change)
Search Report:	981202	A3	Separate publication of the European or International search report
Examination:	990714	A2	Date of filing of request for examination: 990518

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB97	1769
CLAIMS B	(English)	200304	1219
CLAIMS B	(German)	200304	1090
CLAIMS B	(French)	200304	1349
SPEC A	(English)	EPAB97	24381
SPEC B	(English)	200304	24342
Total word count - document A			26154
Total word count - document B			28000
Total word count - documents A + B			54154

INTERNATIONAL PATENT CLASS: **G06F-017/30**

...SPECIFICATION editor 184 to manage tiles, containers, and objects; a page editor 186 to create and **layout pages** ; a style sheet editor 187 to edit style sheets; a **search** object editor 189 to create search objects; a word processor, such as a MPS Document...

...SPECIFICATION editor 184 to manage tiles, containers, and objects; a page editor 186 to create and **layout pages** ; a style sheet editor 187 to edit style sheets; a **search** object editor 189 to create search

objects; a word processor, such as a MPS Document...

15/5,K/5 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00783247 **Image available**
AUTOMATED CONVERSION OF PRINT-READY DOCUMENTS FOR DISPLAY
CONVERSION AUTOMATIQUE DE DOCUMENTS PRETS A IMPRIMER AFIN DE LES AFFICHER
Patent Applicant/Assignee:
R R DONNELLEY & SONS COMPANY, 3075 Highland Parkway, Downers Grove, IL 60515-1261, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
DREYER Mark G, 2320 Blue Spruce Lane, Aurora, IL 60504, US, US (Residence), US (Nationality), (Designated only for: US)
SHIVELY J Thomas, 112 N. Washington Street, Hinsdale, IL 60521, US, US (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
MCCRACKEN William E (agent), Marshall, O'Toole, Gerstein, Murray & Borun, 233 S. Wacker Drive, 6300 Sears Tower, Chicago, IL 60606, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200116792 A1 20010308 (WO 0116792)
Application: WO 99US20203 19990901 (PCT/WO US9920203)
Priority Application: WO 99US20203 19990901
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW SD SL SZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: G06F-017/24
International Patent Class: **G06F-017/30**
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 12720

English Abstract
A system for converting a page layout file into a database for use by a display program which converts the database for display in a medium opens the page layout file, converts a portion of the page layout file into data compatible with the medium and assembles the data into the database.

French Abstract
Systeme servant a convertir un fichier d'implantation de pages en une base de donnees concue pour etre utilisee par un programme d'affichage qui convertit cette base de donnees afin de l'afficher sur un support, ouvre le fichier d'implantation de pages, convertit une partie de ce fichier d'implantation de pages en donnees compatibles avec le support et assemble les donnees dans la base de donnees.

Legal Status (Type, Date, Text)
Publication 20010308 A1 With international search report.

International Patent Class: **G06F-017/30**
Fulltext Availability:
Detailed Description

Detailed Description
... from the foregoing that the present
invention converts the unstructured and untagged data in the
page layout file into **searchable** data related to an object.

Numerous modifications to the present invention will be apparent to...

15/5,K/6 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00736192 **Image available**
SIMILARITY SEARCHING BY COMBINATION OF DIFFERENT DATA-TYPES
RECHERCHE DE DOCUMENT PAR SIMILITUDE AVEC COMBINAISON DE DIFFERENTS TYPES DE DONNEES
Patent Applicant/Assignee:
HEWLETT-PACKARD COMPANY, 3000 Hanover Street, Palo Alto, CA 94304, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
SHARPE William, 26 Holmwood Gardens, Westbury-on-Trym, Bristol BS9 3EB, GB, GB (Residence), GB (Nationality), (Designated only for: US)
BURNS Roland John, 62 Rock Harbor Lane, Foster City, CA 94404, US, US (Residence), GB (Nationality), (Designated only for: US)
Legal Representative:
LAWRENCE Richard Anthony, Hewlett-Packard Limited, Intellectual Property Section, Filton Road, Stoke Gifford, Bristol BS34 8QZ, GB
Patent and Priority Information (Country, Number, Date):
Patent: WO 200049526 A1 20000824 (WO 0049526)
Application: WO 2000GB489 20000215 (PCT/WO GB0000489)
Priority Application: GB 993451 19990216
Designated States: JP US
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **G06F-017/30**
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 4211

English Abstract
This invention relates to managing multiple web servers, a web service system and method that allows a system operator to distribute content to each web server in the web service system and notifying a computer, such as a cache server, of content changes. In one embodiment, a method for notifying a computer of changed files includes identifying changes in a source file set, storing the identified changes in a modification list and transmitting the modification list to a computer. In one embodiment, a method for replicating changes in a source file set on a destination file system and for notifying a computer of the changes includes identifying changes in a source file set, storing the changes in a first modification list, and transmitting the first modification list to an agent having access to a destination file system.
French Abstract
Cette invention concerne la gestion de serveurs multiples sur le Web, un systeme de service Web et un procede permettant a un operateur systeme de repartir un contenu dans chacun des serveurs Web dudit service et d'informer un ordinateur, un serveur a antememoire par exemple, de changements survenus dans ledit contenu. Selon un mode de realisation, un procede de notification d'ordinateur a propos de changements consiste a identifier des changements survenus dans un jeu de dossiers source, a stocker les changements identifies dans une liste de modification et a transmettre ladite liste a un ordinateur. Un autre mode de realisation concerne un procede de reproduction de changements dans un jeu de dossiers source sur un systeme de dossiers destinataires, et de notification d'un ordinateur a propos de ces changements. Ce procede consiste a identifier des changements dans un ensemble de dossiers source, a stocker ces changements dans une premiere liste de notification et a transmettre cette premiere liste de notification a un agent qui a acces au systeme de dossiers destinataires.

Legal Status (Type, Date, Text)
Publication 20000824 A1 With international search report.
Publication 20000824 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Main International Patent Class: **G06F-017/30**
Fulltext Availability:
Detailed Description
Claims

Detailed Description
... In a second aspect, the invention provides a method of searching a database to find
documents similar to a query **document** , comprising: decomposing the query
document into elements of different data types; determining a layout element in a layout datatype from the spatial arrangement of the elements in the **document** ; for the
SUBSTITUTE SHEET (RULE 26)
layout element, conducting a **layout** similarity **search** to return match results from the database for the layout element.

Brief Description of Figure...

...according to an embodiment of the second aspect of the invention for conducting a similarity **search** for **layout** information.

Description of Embodiments
A typical document contains a plurality of data types. The most...the first aspect of the invention given the same reference numbers as in Figure 2. **Layout** similarity **searching** , whether used on its own or as one of the elements in a combined search...

...of different data types are used for text and
SUBSTITUTE SHEET (RULE 26)
for overall **document** type. Using a rule-based approach, different text blocks and whole **documents** , especially in the case of formal workflow **documents** , can be assigned particular functions with relatively high confidence. For example, it is well known that isolated text blocks at the top of a **page** and handwriting at the bottom are suggestive of a letter, and so different spatial regions of the **document** can be assigned to appropriate functional fields (address, letter text etc) - likewise, table and currency totals in a **document** can be identified as a discrete element, and their presence limits the **document** to another group (bill, quote or invoice). **Layout** **searching** can thus involve matching to templates representing different workflow **document** types (thus promoting matching of a **document** determined to be a letter against other letters). An appropriate mechanism is to normalise a...

Claim
... the spatial arrangement
of the elements in the document;
for the layout element, conducting a **layout** similarity **search** to return match results from the database for the layout element.
SUBSTITUTE SHEET (RULE 26)
. A method as claimed in claim 14, wherein the **layout** similarity **search**
involves searching against templates representative of different **document** types.

16 A method as claimed in claim 14, wherein the elements include elements of...

...is a piece of line art
below the text is an image
IMAGE

31
32 **SEARCH** OF
LAYOUT DATABASE
Figure 3
/4
SELECTION
21
22
DECOMPOSITION
TO SEPARATE ELEMENTS,
INCLUDING LAYOUT ELEMENT
EARCHING...

...International Patent Classification (IPC) or to both national classification and IPC
B. FIELDS SEARCHED
Minimum **documentation** searched (classification system followed by classification symbols)
IPC 7 G06F
Documentation searched other than minimum **documentation** to the extent that such **documents** are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
C. **DOCUMENTS** CONSIDERED TO BE RELEVANT
Category o Citation of **document** , with indication, where appropriate, of the relevant passages Relevant to claim No.
X DE 197...

...line 51 - line 61
column 5, line 15 - line 56
figures 3,4
ED Further **documents** are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited **documents** @rn later **document** published after the international filing date
or priority date and not in conflict with the application but
W **document** defining the general state of the art which is not cited to understand the principle or theory underlying the
considered to be of particular relevance invention
'E' earlier **document** but published on or after the international W **document** of particular relevance; the claimed invention
filing date cannot be considered novel or cannot be considered to
V **document** which may throw doubts on priority ciaim(s) or involve an inventive step when the **document** is taken alone which is cited to establish the publication date of another @Yw **document** of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the "0* **document** referring to an oral disclosure, use, exhibition or **document** is combined with one or more other such docu
other means ments, such combination being obvious to a person skilled
"P' **document** published prior to the international filing date but in the art. later than the priority date claimed W **document** member of the same patent family Date of the actual completion of the international search...

...nl, Triest, J
Fax: (+31-70) 34G--3016
Form PCTASA,210 (secoml shoot) (July 1992)
page 1 of 2
INTERNATIONAL SEARCH REPORT
I iational Application No
PCT/GB 00/00489
C.(Contlnuation) **DOCUMENTS** CONSIDERED TO BE RELEVANT
Category o Citation of **document** , vAth indication,where appropriate, of the relevant passageS Relevant to claim No. x MUKHERJEA S...

...PROCEEDINGS OF WORKSHOP ON LANGUAGES FOR
AUTOMATION,US,WASHINGTON, IEEE COMP. SOC.

PRESS,
Vol. -, 1988, **pages** 149-154, XPOO0118740
ISBN: 0 0890-0
page 150, column 2. paragraph 4 - **page** 151,
column 1, paragraph 3
Form PCTASA/21 0 (oontinuation of second sheet) (July 1992)
page 2 of 2
INTERNATIONAL SEARCH REPORT
IF ational Application No
information on patent family members PCT/GB 00/00489
Patent **document** Publication Patent family Publication
cited in search report I I member(s) date
DE 19708265...

15/5,K/7 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00510329 **Image available**
DOCUMENT IMAGE STRUCTURE ANALYZING METHOD
PROCEDE D'ANALYSE DE STRUCTURE D'IMAGE DE DOCUMENT
Patent Applicant/Assignee:
LIN ChunChen,
Inventor(s):
LIN ChunChen,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9941681 A1 19990819
Application: WO 99JP649 19990215 (PCT/WO JP9900649)
Priority Application: JP 9850130 19980216
Designated States: US AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **G06F-017/30**
International Patent Class: G06T-001/00
Publication Language: Japanese

English Abstract
According to a **document** image structure analyzing method, a text generated by capturing a **document** image of a contents **page** is analyzed to examine the entire **document** structure (contents analysis), **document** images of the text are captured to perform **layout** analysis, and **matching** is performed by using information obtained by the contents analysis, thus efficiently creating an accurate electronic **document** having a logic structure.

French Abstract
L'invention concerne un procede d'analyse de structure d'image de document, qui consiste a analyser un texte genere par la capture d'une image de document d'une page de table des matieres, pour permettre l'examen de la structure du document global (analyse du contenu), a capturer des images de document pour permettre l'analyse de la disposition, et a mapper au moyen des informations obtenues par l'analyse du contenu, ce qui permet de creer efficacement un document electronique precis ayant une structure logique.

Main International Patent Class: **G06F-017/30**

English Abstract
According to a **document** image structure analyzing method, a text generated by capturing a **document** image of a contents **page** is analyzed to examine the entire **document** structure (contents analysis), **document** images of the text are captured to perform **layout** analysis, and **matching** is performed by using information obtained by the contents analysis, thus efficiently creating an accurate electronic **document** having a logic structure.

15/5,K/8 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00474261 **Image available**

DATA COMMUNICATIONS
COMMUNICATIONS DE DONNEES

Patent Applicant/Assignee:
ORANGE PERSONAL COMMUNICATIONS SERVICES LIMITED,
EVANS Michael,
FURNELL Steven,
PHIPPEN Andrew,
REYNOLDS Paul,
HAMMAC John,
KELLIHER John,
Inventor(s):
EVANS Michael,
FURNELL Steven,
PHIPPEN Andrew,
REYNOLDS Paul,
HAMMAC John,
KELLIHER John,

Patent and Priority Information (Country, Number, Date):
Patent: WO 9905613 A1 19990204
Application: WO 98GB2177 19980722 (PCT/WO GB9802177)
Priority Application: GB 9715516 19970722
Designated States: AL AM AT AT AU AZ BA BB BG BR BY CA CH CN CU CZ CZ DE DE DK DK EE EE ES FI FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: **G06F-017/30**
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 6236

English Abstract
A multimedia client terminal, said terminal comprising: a browser for interpreting a multimedia document received from a remote server, said interpreting means comprising: means for recognising textual presentation markup tags in said document and presenting text to a user in accordance with said markup tags; means for recognising a standard set of document-independent local library file markup tags in said document; means for storing a set of non-textual local library files corresponding to said local library tags; and means for presenting the contents of one of said local library files to a user in response to the recognition of one of said local library file tags in said multimedia document.

French Abstract
L'invention porte sur un terminal client multimedia comprenant un navigateur qui interprete un document multimedia recu d'un serveur a distance. L'interpreteur comprend: un moyen permettant de reconnaitre des etiquettes de balisage de presentation textuelle du document et presenter un texte a un utilisateur en fonction des etiquettes de balisage; un moyen permettant de reconnaitre dans le document un ensemble type d'etiquettes de balisage pour fichiers de bibliotheque locaux independants d'un document; un moyen d'enregistrement d'un ensemble de fichiers de bibliotheque locaux non textuels correspondant aux etiquettes de bibliotheque locales; et un moyen permettant de presenter le contenu d'un de ces fichiers locaux a un utilisateur en reponse a la reconnaissance d'une des etiquettes locales du document multimedia.

Main International Patent Class: **G06F-017/30**
Fulltext Availability:
Detailed Description
Detailed Description
... same type of image irrespective 1 5 of the theme being used (i.e.

HOME, **SEARCH** , ARROW etc).

* Design
* range of standard **page design** constructs in terms of lines, bullets,
separators, etc. The structure of this category is strictly...

15/5,K/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00414522 **Image available**
HIERARCHICAL STRUCTURE EDITOR FOR WEB SITES
EDITEUR DE STRUCTURES HIERARCHISEES POUR SITES DU WEB
Patent Applicant/Assignee:
RAE TECHNOLOGY INC,
Inventor(s):
ARORA Samir,
ARORA Gagan,
LAKSHMINARAYAN Rajagopal,
BROWN Gregory,
FRID-NIELSEN Martin,
MOK Clement,
KLEINBERG David,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9804983 A1 19980205
Application: WO 97US12820 19970725 (PCT/WO US9712820)
Priority Application: US 96687971 19960729
Designated States: AU BR CA CN IL JP KP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **G06F-017/30**
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 14051

English Abstract
A method and apparatus for a structure editor implementing a "top-down" approach to designing a Web page. The user uses a "drag and drop" interface to add, delete, and move display elements to define the hierarchy of the site and to define the layout of each page in the site. The present invention automatically generates a layout for each page. This layout contains display elements that represent the links between pages of the site. The present invention automatically adds, removes, and deletes the appropriate links between the pages of the site as the user moves display elements. After the user has defined the hierarchy of the site and the layout of each page in the site, the user "publishes" the site. The publish function automatically generates HTML for each page of the site in accordance with the display elements of each page, yielding true WYSIWYG pages for the site.

French Abstract
L'invention porte sur un procede et un appareil constituant une structure d'edition mettant en oeuvre une approche "tete en bas" pour presenter une page du reseau. L'utilisateur recourt a une interface "tirer lacher" pour ajouter, effacer, et deplacer les elements de presentation pour definir la hierarchie du site et la mise en page de chaque page a l'interieur du site. Ladite invention elabore automatiquement une mise en page pour chaque page. Cette mise en page contient des elements de presentation representant les liens entre les differentes pages du site. Ladite invention ajoute, efface, et deplace les liens appropries entre les pages du site a mesure que l'utilisateur deplace les elements de presentation. Apres avoir defini la hierarchie du site, et la mise en page de chaque page du site, l'utilisateur "publie" le site. La fonction publication produit automatiquement un langage hypertexte pour chaque page du site en fonction des elements de

presentation de chaque page, ce qui donne de veritables pages WISIWYG pour le site.

Main International Patent Class: **G06F-017/30**
Fulltext Availability:
Detailed Description

Detailed Description
... that-is-linked-to is identified by looking at the page hierarchy specified by the **page layout** tree. After the node is identified, the processor **finds** the
1 5 URL, name, etc of the node and generates the display or HTML...

15/5,K/10 (Item 10 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00376923
STRUCTURED FOCUSED HYPERTEXT DATA STRUCTURE
STRUCTURE DE DONNEES HYPERTEXTE ARTICULEE SUR LA STRUCTURATION
Patent Applicant/Assignee:
HYPERMED LTD,
OREN Avraham,
OLCHA Lev,
KOWALSKI Nahum,
MARGULYAN Rita,
Inventor(s):
OREN Avraham,
OLCHA Lev,
KOWALSKI Nahum,
MARGULYAN Rita,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9717666 A2 19970515
Application: WO 96IL131 19961023 (PCT/WO IL9600131)
Priority Application: US 95551929 19951023
Designated States: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: **G06F-017/30**
International Patent Class: G06F-17:21
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 263802

English Abstract
A hypertexted data structure (3/16) stored on a computer readable memory device and organized in a hierarchy of at least two levels, the data structure comprising: a plurality of data units (18-20) positioned at different levels in the hierarchy each containing at least some textual information (23) and a plurality of hypertext links (1) each linking at least part of the textual information in a given source data unit to a target data unit; wherein at least one of the hypertext links (1) is linked to at least one hypertext node (34) which contains information relating at least to both the given source data unit and the target data unit from which the relative positions in the hierarchy of the given source and target data units linked by the hypertext link may be determined.

French Abstract
La presente invention concerne une structure de donnees en format hypertexte (3/16) stockees dans une memoire lisible par ordinateur et organisee selon une hierarchie comportant au moins deux niveaux. Cette structure de donnees est constituee, d'une part de plusieurs unites de

donnees (18-20) se placant a differents niveaux de la hierarchie, chacune de ces unites de donnees contenant au moins quelques donnees textuelles (23), et d'autre part, d'un jeu de liens hypertexte (1), chacun de ces liens reliant au moins une partie de l'information textuelle d'une unite de donnees origine specifique a une unite de donnees cible. L'un au moins des liens hypertexte (1) est relie a l'un au moins des noeuds hypertexte (34) qui contient des donnees se rapportant au moins a la fois a l'unite de donnees origine specifique et a l'unite de donnees cible a partir de laquelle il est possible de determiner des positions relatives dans la hierarchie. Ces positions relatives sont celles des unites de donnees origine et cible reliees par le lien hypertexte.

Main International Patent Class: **G06F-017/30**
Fulltext Availability:
Detailed Description

Detailed Description
... multiple parent data structure of the present invention, it may be advantageous to add
ific **pages** **designed** to serve as links between two parallel chapters of
speci
different types (e.g., disease...LeftDest + WidthDest >
' - Describe the location and size of Printer.ScaleWidth Then Exit Function
the source **image** in pixels. If TopDest + HeightDest >
0 Printer.ScaleHeight Then Exit
'Returns Function
True if successful...

```
Set      Items   Description
S1    10182449   SEARCH? OR SEEK? OR QUER? OR FIND? OR MATCH?
S2       48856   (DATA()ELEMENT? OR PAGE? OR DOCUMENT?)(N)(LAYOUT? ? OR LAY-
                 ()OUT? OR DESIGN OR DESIGNS OR DESIGNED OR ARRANGEMENT?)
S3         787   (ARRANG? OR LAYOUT? OR LAY()OUT? OR DESIGN?)(2N)(TEXT(2N)(-
                 IMAGE? OR PICTURE?))
S4     1275515   DECOMPOS? OR DECONSTRUCT? OR DISASSEMB? OR REASSEMB? OR DE-
                 ASSEMB? OR SPLIT? OR BREAK?()(UP OR DOWN)
S5       53317   (DIFFERENT? OR SEPARATE? OR VARIOUS? OR VARIET?)(2N)(ELEME-
                 NT? OR DATATYPE? OR DATA()TYPE?)
S6      308965   LAYOUT? OR LAY()OUT? ?
S7          68   S1(S)(S2 OR S3)(S)(S4 OR S5)
S8          43   RD (unique items)
S9          40   S8 NOT PY>2000
S10         40   S9 NOT PD=20000215
S11         35   S10 NOT PD=20000215:20020215
S12         35   S11 NOT PD=20020215:20031229
File 275:Gale Group Computer DB(TM) 1983-2003/Dec 29
         (c) 2003 The Gale Group
File  47:Gale Group Magazine DB(TM) 1959-2003/Dec 23
         (c) 2003 The Gale group
File  75:TGG Management Contents(R) 86-2003/Dec W3
         (c) 2003 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2003/Dec 29
         (c) 2003 The Gale Group
File  16:Gale Group PROMT(R) 1990-2003/Dec 29
         (c) 2003 The Gale Group
File 624:McGraw-Hill Publications 1985-2003/Dec 26
         (c) 2003 McGraw-Hill Co. Inc
File 484:Periodical Abs Plustext 1986-2003/Dec W2
         (c) 2003 ProQuest
File 613:PR Newswire 1999-2003/Dec 29
         (c) 2003 PR Newswire Association Inc
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 141:Readers Guide 1983-2003/Nov
         (c) 2003 The HW Wilson Co
File 553:Wilson Bus. Abs. FullText 1982-2003/Nov
         (c) 2003 The HW Wilson Co
File 621:Gale Group New Prod.Annou.(R) 1985-2003/Dec 24
         (c) 2003 The Gale Group
File 674:Computer News Fulltext 1989-2003/Dec W1
         (c) 2003 IDG Communications
File  88:Gale Group Business A.R.T.S. 1976-2003/Dec 23
         (c) 2003 The Gale Group
File 369:New Scientist 1994-2003/Dec W2
         (c) 2003 Reed Business Information Ltd.
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 635:Business Dateline(R) 1985-2003/Dec 27
         (c) 2003 ProQuest Info&Learning
File  15:ABI/Inform(R) 1971-2003/Dec 27
         (c) 2003 ProQuest Info&Learning
File   9:Business & Industry(R) Jul/1994-2003/Dec 26
         (c) 2003 Resp. DB Svcs.
File  13:BAMP 2003/Dec W3
         (c) 2003 Resp. DB Svcs.
File 647:CMP  Computer Fulltext 1988-2003/Dec W3
         (c) 2003 CMP Media, LLC
File 148:Gale Group Trade & Industry DB 1976-2003/Dec 24
         (c)2003 The Gale Group
File 634:San Jose Mercury  Jun 1985-2003/Dec 27
         (c) 2003 San Jose Mercury News
```

12/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02179948 SUPPLIER NUMBER: 20526638 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Highlights from the exhibition. (Seybold Web Publisher conference)
(Industry Trend or Event)
McKenzie, Matt; Rossello, Rosanne; Votsch, Victor
Seybold Report on Internet Publishing, v2, n8, p3(1)
April, 1998
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 6649 LINE COUNT: 00523

... error types and another will highlight the incorrect code. The product also includes some strong **search** capabilities, such as the ability to **search** separately in the source code and **page layout** views, pattern-based **searching** and wildcard **searches** . Users can also store and reuse sets of **search** criteria.

The new version of CyberStudio includes dozens of other notable improvements, and we didn...